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A STUDENT'S TEXTBOOK
IN THE
HISTORY OF EDUCATION

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A STUDENT'S TEXTBOOK IN THE HISTORY OF EDUCATION

BY

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TO MY WIFE
SARAH E. DUGGAN

PREFACE

Some years ago I prepared a syllabus in the history of education for the use of my undergraduate classes in the College of the City of New York and in an extension course offered to teachers in the city. This volume is the result of a suggestion on the part of those pupils that the syllabus be expanded into a textbook. It is written primarily as a teaching instrument, for students who are preparing to teach or who have a cultural interest in the subject but who are unable at the time to undertake a deeper or more detailed study than the survey here presented. Certain characteristics which have been kept in view ought, perhaps, to be mentioned.

1. It is intended to be of practical assistance to the teacher in giving him a better understanding of present-day problems in education. Unless the history of education throws light upon the educational principles and practices of today, it has only an academic interest and should not be a prescribed subject in the training of a teacher. A series of questions and of topics for study has been put at the end of each chapter, therefore, to suggest further study in the relation of the content to the problems that confront us today, and to make clear the manner in which past experience may help to clarify present theories and practices. Each chapter is also prefaced by an outline to enable the student better to understand the facts of the text. Illustrations, where they have served to elucidate the text, have been inserted.

PREFACE

2. It emphasizes modern education without slighting any other period. Attention is directed to the rapid changes that have taken place in educational organization and practice since Rousseau, and particularly to the tendencies of the present day. Moreover, the longest chapter of the book is the one devoted to the development of American education.

3. It is a history of education, not a history of pedagogy. Nevertheless, an attempt has been made to give an adequate view of classroom practices and of methods of administration in the evolution from the relatively simple systems of the past to the complicated and detailed systems of the present. To avoid burdening the memory with mere names and dates, attention has been concentrated upon the typical leader or leaders in each period; and to make an appeal to the understanding, the social background of each individual, institution, or movement studied has been carefully described.

4. It aims to explain how Western civilization developed the educational ideals, content, organization, and practices which characterize it today. For that reason ancient systems like the Chinese or Hindu, which did not contribute *directly* to Western culture and education, are not considered at all, and the Spartan receives but a passing notice. On the other hand, the Jewish system, from which Western culture received so large a contribution in the form of religion, ethics, and literature, is treated somewhat fully.

5. It has for its primary purpose the explanation of the way in which each people has worked out the solution of the great problem that has confronted every people at all times, in all places, and in all stages of development, namely, the reconciliation of individual liberty with social stability; and of the way in which

PREFACE

each has organized its education to prepare the individual to live in accordance with that solution. When a people's political and social ideals changed, its system of education changed to conform to the new ideals. Similarly every great thinker who has written upon education has emphasized either social control, as did Plato in the "Republic," or individual freedom, as did Rousseau in the "Emile." One must always have this problem in view if he is to appreciate the significance of the evolution of modern education.

In the preparation of this I am greatly indebted to several of my colleagues in the College of the City of New York. Professor Harry C. Krowl read the entire manuscript, and Dr. Barclay W. Bradley and Mr. Philip R. V. Curoe read both manuscript and proof. Every opinion and statement made in the book are my own, but the criticisms as to the content and its organization made by these gentlemen have been most helpful. Professor Paul Monroe's "Text-book in the History of Education," Professor Frank P. Graves' "History of Education," and Professor Samuel C. Parker's "History of Modern Elementary Education" have been at all times sources of suggestion which I gratefully acknowledge. In spite of my effort to be accurate, errors may have crept into the text, for which I must beg the indulgence of the reader. If the book should impress upon the general reader the conviction that educating its citizens is the most important function of the state, and upon the prospective teacher the conviction that he is destined to engage in the noblest of professions, I shall feel repaid for the labor spent upon it.

STEPHEN PIERCE DUGGAN

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PART I

EDUCATION IN ANCIENT TIMES

Characteristics: The submergence of the man in the citizen. Education for civic life, hence emphasis upon the arts of speech.

CHAPTER I

INTRODUCTION

MEANING OF THE HISTORY OF EDUCATION

Outline.—Historically, education is the means by which nations have attempted to realize their social and spiritual ideals.

These ideals are concerned primarily with the relative emphasis to be placed upon the individual and upon social control.

In the East the emphasis is upon social control; in the West, upon the individual. In the East education is primarily concerned with handing on traditional knowledge; in the West, with securing new knowledge.

This book treats only the educational systems that have directly contributed to the ideals of Western civilization.

From the standpoint of history, education is the means by which nations have attempted to realize their social and spiritual ideals. Every nation that has faith in its ideals wishes to have them transmitted for the benefit of its own posterity, and its system of education is the instrument by which it tries to do this. Because these ideals have been different in the several nations their systems of education have differed. And because the ideals of the same nation undergo change its system of education will change.

The Individual vs. the State.—Every child is born into society; no one is born unto himself. Society does

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not consist of a mere aggregation of individuals but of individuals organized into institutions such as the family, the state, the church. The education of the individual, therefore, involves making him conscious that he is a member of a social group and that he must live in relation to others, i. e., within the restrictions of society's institutions. Therefore, to understand the system of education of any society, it will be necessary to understand its institutions. The individual feels that he must have a certain freedom in order to realize his being. Society on the other hand feels that it must enforce certain restrictions in order to save itself. Thus arises the problem of the state: How much freedom shall be given to the individual, and how much shall be taken from him? Thus arises also the problem of education: How may it be organized to develop the capacities of the individual in such a way as to render the greatest service to society? Each nation of the past and of the present has had a solution for these problems, but the extremes of difference in the solutions are to be found in the East and the West.

Characteristics of Eastern Society.—In the East the idea of the unity of society is tenaciously held; the individual is suppressed, his destiny is controlled by some force external to himself, e. g., ancestor worship in China, or the caste system in India. Society is conservative, it holds rigorously to the past and views with dread any change. The individual is *meditative*: he turns his mind in upon himself, not upon what is external to him. He asks why he is here, whence he came, whither he is going. The result is that the East has contributed all the great religions to civilization.

Hence the culture of the East consists in its traditional knowledge accumulated in its literature. We find, there-

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fore, that the content of its education is practically confined to the literary element, e. g., the classics of the Chinese, the Vedas of the Hindus, the Bible of the Jews. As the word in which the truth was conveyed became fixed and definite, the form of expression became as important as the truth itself; hence the chief method of learning was memoriter, and memory was the mental power which subordinated the present to the past. The result is that society in the East is static. That this is a consequence not of race but of education is evident from the rapidity with which the Japanese transformed their social system after the adoption of the content and method of Western education.

Characteristics of Western Society.—In the West society is progressive, because the individual is exalted, not suppressed. Tradition has a comparatively small hold upon society, and reverence for what the ancestors did has but slight influence. The individual is not meditative, but *investigative*. He turns his mind outward to things external to himself, to man and nature. Hence he has contributed science, both natural and social, to civilization.

The aim of the education of the individual is to enable him to realize himself, to develop to the utmost what is best in him. The content of education, therefore, is not merely literature embodying the experience and ideals of the race, but also science, the study of the phenomena of nature and society as they present themselves today. And the method of learning is not wholly the memoriter, but that of observation and investigation. The individual is taught the traditional knowledge and customs of society, not merely that he shall conform to them, but that he shall contribute to improvement and progress. Education is to enable the individual to *make* his place

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in society, not to *take* the one into which he was born. The result is that society in the West is dynamic; it is there that civilization has witnessed its greatest progress.

Aim of This Book.—It is impossible in the short survey that this book makes to consider all the systems of society and of education that have appeared among men. Some principle of selection must be adopted. We shall, therefore, study only the systems of education of those nations which have contributed directly in some way to the ideals and educational methods of Western civilization.

CHAPTER II

JEWISH EDUCATION

Outline.—The Jews contributed religion, moral ideals and literature to Western civilization. Their chief educative institutions were religion and family life.

The period from the Exodus, c. 1500 B.C., to the Exile, c. 586 B.C., was one of nationalization, in which the Temple worship and the Prophets played an important part. The education of the individual remained a purely family affair.

After the return from Babylon, the Law became the great factor in the lives of the people. The scribes to teach it and the synagogue as the place of instruction in it became important institutions.

In the second century before Christ the synagogue school arose to give elementary education with especial attention to the Law. Higher education was given in the Rabbinical schools.

From the Jews Western civilization has received the following contributions to its spiritual and social ideals: (1) its religion; (2) the basis of its system of ethics; (3) the most important part of its literature, the Bible.

Institutions Which Were Educative.—The two institutions which received emphasis among the Jews were religion and family life. Religion was synonymous with patriotism. Jehovah was the God of Israel. Loyalty to Him was loyalty to the nation. Even after Jehovah as the greatest of all gods evolved into Jehovah as the only

universal God, the Jews remained His chosen people. Man was made in His likeness and personal holiness before Him became the end of man's existence. The attainment of character, not knowledge, was the aim of life. Chastity as an element of holiness resulted in a higher regard for woman than was found among any other ancient people. The mother as well as the father was honored. Children were welcomed as blessings. Religion and the family both emphasized the moral side of life.

Historical Survey.—There were three great crises in Jewish history: (1) the Exodus from Egypt, c. 1500 B.C.; (2) the exile to Babylon, 586 B.C.; (3) the destruction of the Temple by Titus, 70 A.D.

Before the Exodus the Jews were in the family stage of development, i. e., they consisted of an aggregation of families. The status of the father was, as with all early peoples, that of ruler, priest, and teacher. The first differentiation of function took place at the Exodus, when, according to the Bible, the tribe of Levi was set aside for various religious functions and the house of Aaron to furnish the priests and the high priests. But the teaching of the child remained in the hands of the parent and consisted solely in the training in family duties, secular and religious.

The period from the Exodus to the Exile was a period of nationalization. The Jews went into Palestine organized into tribes which fought among themselves when not united against the common foe. During all this period the great symbol of unity, and at the same time one of the chief educative influences, was the Temple and its worship. Three times a year every male Jew was expected to visit the Temple in person, and this practice had the same nationalizing influence upon

the Jews as had the Olympic games upon the Greeks.

The Prophets.—Towards the close of this period another educational influence which had arisen acquired its greatest influence, viz., the schools of the Prophets. Religion had become truly monotheistic and ethical, but because of the greater attractiveness of the sensual and non-moral religions about them, the Jews were constantly in danger of falling from the worship of Jehovah. The Prophets, who were laymen, arose as teachers of righteousness to recall the Jews from religious and moral backsliding. With their immediate followers they formed schools from which radiated many good influences. For the Prophets taught not merely the necessity of personal holiness before the Lord, but the equally important necessity of justice between man and man. They formed at times the opposition party in the state. As Jehovah was at that time emphatically a national god, the Prophets also had a strong nationalizing influence. They were religious seers and social reformers, who brought their followers together at various places to deepen their religious insight and fervor, before traveling among the common people to spread a greater knowledge of the religion of Jehovah and loyalty to it. It is in this sense only that the word “school” is here used.

The Exile.—The warnings of the Prophets were not heeded; and the Jews went into the Captivity, from which they learned a lesson of great national and educational importance. They had been taken away from Palestine, and the Temple had been destroyed, and yet they had remained united. Why? Because of the observance of the Law. Shortly before their removal to Babylon, King Josiah had caused to be reduced to writing the Pentateuch, which he made an authoritative code of laws.

This code was the bond of union among the people during the Exile, and many additions were made to it, especially from the teachings of the Prophets. After the return of the Jews to Palestine under Ezra, the Law became the central fact in their lives, and its study and observance the most important duty. Two institutions arose with which it was associated:

1. The scripture-scholars, or so-called "scribes," the professional class of teachers who were to have the Law in charge.

2. The synagogue, the institution established as the place for its exposition. In every village among the Jews this institution was now founded, where twice on the Sabbath the people were assembled to listen to an exposition of the Law. It can be understood readily what an educational influence this would have upon the people. The Sabbath itself was a unique institution in the ancient period, of incalculable benefit to all the people. As time went on the scribes and the priests were held in equal veneration.

The duty of the scribes was threefold: (1) To examine and teach the Law. (2) To apply the Law to the daily lives of the people. It must be remembered that the Jewish Law was a mixture of criminal, civil, sanitary, and ceremonial laws. It can readily be seen how deciding the way it should be applied to the daily lives of the people gave the scribes enormous power. (3) To interpret the Law. When the Jews were supposed to have received the Law, at the time of the Exodus, they were a nomadic, pastoral people. They had meantime become an agricultural people and had also engaged in trade and commerce. The Law that had been given to them had to be interpreted to conform to new conditions. These interpretations of the Law, with the com-

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mentaries written upon them in later times, form the Talmud, which, in the period after the dispersion, became almost of equal importance with the Law itself.

Elementary Education: The Synagogue School.—With the passing of time it became increasingly evident to the Jewish leaders that the existence of Israel as a nation would depend, not upon its ability to defend itself physically against foreign military forces, but spiritually against foreign social influences. The nation was to be preserved through a knowledge and practice of the Law, and transmitting it to the child could no longer be left to the parent, who might be careless or indifferent. A great reverence arose for the rabbis, i. e., the scribes who became experts in the Law. The necessity for schools in which the youths were to receive instruction in this bond of union was admitted by all, and in the second century before Christ elementary schools became attached to the synagogue in many villages. Finally, A.D. 64, the High Priest, Joshua ben Gamala, ordered the establishment of an elementary school in every village. Attendance was to be compulsory for male children, and the school period was between the ages of six and fifteen. An education somewhat similar to that given in the synagogue school, tho not so intensive, was provided for girls at home, in addition to instruction in household duties. This resulted from the relatively high position held by women among the Jews.

Content and Method of Study.—Great care was taken by the Jews in the selection of teachers for these elementary schools. They were of necessity scribes, married men of maturity and character. They usually pursued some other vocation in addition to teaching and were willing

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to give instruction gratis, tho accepting what their pupils could donate. They were held in the highest esteem among the people, being regarded as the real defenders of the nation, just as warriors were, among other peoples. The school equipment was very simple. The children sat upon benches facing the teacher who was supposed to have in charge a group of not more than twenty-five. The children were seldom provided with books, which were costly, but had wax tablets and a stilus with which to learn writing. The school day was from morning until evening with a recess at mid-day, and the only vacations were feast and fast days. The content of school work was instruction in reading, writing, counting, and the history of their people, the poetry of the Psalms, memorizing the Law as found in the Pentateuch, and the Mishna or oral law. In addition every boy had to learn some form of handicraft. As with most peoples before the invention of printing, the method of teaching was chiefly oral instruction and the method of study learning by heart. The teachers were skillful in correlating the various memories—visual, auditory, and muscular—upon a passage to be learned, and made extensive use of mnemonic devices and frequent repetition. The discipline was probably rigorous.¹

Higher Education.—Even before the establishment of the elementary schools institutions for higher education had developed for the instruction of the scribes. These “houses of instruction” were at first established in the homes of prominent scribes, and were of the nature of colleges devoted to an intensive study of the Law and, in the later period, of the Law and the Talmud. The

¹The student is advised to compare the work of the synagogue school with that of the Greek music school on page 22.

method of teaching was that of exposition upon the part of the master and afterwards of question and disputation on the part of the pupils. In all probability, however, the work was quite dogmatic in character and the interpretation of the master was accepted without much question. The strained interpretations and quibbling necessary to make a passage render a meaning to conform to new conditions and advancing moral ideals would naturally sharpen the wits and develop a habit of close study. After the introduction of Greek culture—that dissolvent influence upon the Eastern world—with elements of education, such as art, science, and philosophy, unprovided by the Jewish system, and with its skeptical attitude of mind, the unquestioning acceptance of authoritative interpretation seemed to the leaders of the patriotic party an absolute necessity. This had a very narrowing and formalizing influence on life and education.

Results of Jewish Education.—Jewish education conformed to Eastern ideals, but with a difference. The individual was subordinated and his destiny was determined by a power external to himself; that power was God. Education consisted in transmitting the religious literature chiefly by a memoriter and unquestioning method; but the saving feature of the whole system was that the Jew was taught to make holiness before the Lord the aim of his daily life. If the Jew was not as free and versatile as the Greek, he was more moral and stable. The great lesson to be drawn from a study of Jewish history and education is that not any national peculiarity but a strict adherence to an educational system having a peculiarly high moral ideal has preserved the unity of the race. The salvation of a people is dependent upon its education.

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QUESTIONS, COMPARISONS, AND TOPICS FOR FURTHER STUDY

1. Compare the attitude of the Jews towards mnemonic devices with that of educators today.

2. What can be said in favor of the position taken by the Jews and by modern education towards the demand for maturity in a beginning teacher?

3. What requirements can modern education justifiably demand of a teacher in addition to those of maturity, scholarship, and character demanded by the Jews?

4. What is the value of committing to memory fine passages of literature?

5. Compare the relative importance of moral education among the Jews and modern peoples.

6. Compare the influence of the rabbi among the Jews with that of the minister in early New England.

7. Compare the effect of a written constitution upon Americans with the effect of an inalterable law upon the Jews.

8. Give instances in nineteenth century history of nations realizing that "the salvation of a people is dependent upon its education."

9. Compare the work and influence of a Jewish prophet like Isaiah with that of a modern revivalist like Whitfield.

CHAPTER III

GREEK EDUCATION

Outline.—The Athenians contributed more elements to Western civilization than any other ancient people. Their institutional life was highly educative, and at first their education aimed chiefly at service to the state.

From seven to sixteen the Athenian boy received his physical education in the *palestra* and his intellectual education in the *didascaleum*, both private institutions. From sixteen to eighteen he continued his physical training in the public *gymnasium*. His moral and intellectual education was obtained thru contact with elder citizens. From eighteen to twenty he rendered military service, and at twenty-one became a citizen.

The changes in Athenian life resulting from the Persian Wars offered great opportunities for individual self-advancement. To secure this a different kind of preparation was needed. This was furnished by the Sophists, whose philosophy placed a great emphasis upon the individual and whose education emphasized the arts of speech.

Greek Contributions to Western Civilization.—The Greek bequest to Western civilization is greater than that of any other ancient people. Greece bequeathed to us art, philosophy, the scientific spirit, and a splendid part of world literature. The careful study of no other social system will assist the modern man so much to a wise solution of his own social problems. The educational theory and practice of the Greeks have most sug-

gestive contributions for us today. This splendid heritage came chiefly from Athens and the cities whose ideals were nearly akin to the Athenian. As our study is confined to those peoples among the ancients that have directly contributed to Western civilization, we shall not consider the social and educational system of the Spartans. Moreover, the purpose of Spartan education was the same as that of the old Athenian education, viz., the education of the individual wholly for the service of the state. But in the manner of accomplishment, the Spartan omitted what was best in the Athenian system and never advanced, as did the Athenians, to a higher conception of individuality. Their system has few lessons for us beyond that of warning.

The Problem of the Individual vs. the State.—The solution that the Ionian Greeks made of the problem of the reconciliation of individual liberty with social stability differed from that of all other ancient peoples. Tho the individual lived for service to the state, it was recognized that the best service would be rendered by developing his personality in every direction. Freedom, therefore, characterized Greek life: political freedom, for the city state, though socially an aristocracy, was politically a pure democracy; intellectual freedom, for the Greek mind investigated without regard to the restraints of authority and tradition; moral freedom, for the action of the Greek was finally determined not by some external authority, but by human reason.

The Institutions Which Were Educative.—The institutions into which the Greek individual was born were in most cases highly educative in themselves. Among the more important of these were:

1. *The Assembly.*—Here he listened to the debates for or against the laws which he participated in making.

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THE DIDASCALEUM



THE PALESTRA

Reproduced from illustrations taken from old vases by Freeman in his "Schools of Hellas"

2. *The Juries*.—As every citizen sat on the juries, he obtained the education which came from seeing applied in practice the laws which he helped to make.

3. *The Theater*.—This was free to the citizens, and they saw played there some of the greatest dramas that the human mind has produced.

4. *The Olympic, Isthmian, and Nemean Games*.—These were religious ceremonies to typify the likeness of the human being to the gods. Greeks from all over Hellas flocked to listen to the finest products in oratory, drama, history, and poetry, and see the best that could be produced in art as well as to watch the contests in the games proper.

5. *The Throbbing Life of a Greek City*.—With its inquisitive, disputatious inhabitants, this was an education in itself.

Not all the institutions of Greece, however, were educative from the modern point of view.

Greek Civilization Had Its Blots.—1. *The Economic Blot—Slavery*.—The fine life described above was for but a small part of the inhabitants, about a tenth at Athens in the days of Pericles. Moreover, slavery reduced all forms of manual labor to a contemptible position, tho a large part of the free citizenry was engaged in manual occupations.

2. *The Social Blot—the Debased Position of Women*.—Woman was regarded as having no social function in any other place than the home, to manage the household and to breed children. She seldom appeared in public, and participated little in the active life of the times. The Greek male lived in public and in the open and, like the modern club man, was seldom at home. His female intellectual companionship was found among the brilliant *hetærae* whose very existence emphasized the low state of family life.

3. *Lack of Humanitarianism*.—Infant exposure, the contempt for the cripple, the treatment of the abnormal,

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all illustrate this. Some of these defects were general in antiquity, but in the practice of others the Greek fell below the standard of the Jew.

4. *A Non-Ethical Religion.*—The Greek religion was largely ceremonial; it was not definitely associated with moral instruction. Service to the city state was the chief sanction for good conduct. The deities in which the Greeks believed did not set them examples of moral action.

Early Greek education, like that of most primitive people, was a family matter in which the child learned by imitation of his parent the work he was to do in life. Socially, tradition and custom held sway, and every individual was expected to devote his energy to the welfare of the state. But, unlike Eastern peoples, standards advanced and changed as the result of the actions of individuals, until the social and educational system was developed which prevailed in the fifth century before Christ. This development we shall now consider.

THE OLD GREEK EDUCATION

The Aim.—The aim of Athenian education of this earlier period may be best expressed as the production of individual excellence for public usefulness. The training of the individual was for social service. The virtues of the Greeks were civic virtues. The Greek lived for his city state. But his education developed all sides of his personality. Attention was given to the training of the body as no less important than the training of the mind. And in the training of the mind attention was not merely directed to the intellectual processes but to the emotional and volitional as well. One of the finest characteristics of the Greeks was their sense of propor-

tion, and it was prominently in evidence in their education.

The Organization of Greek Education.—Elementary education at Athens was not a public function. It was the duty of the father to have his boy educated, and the state in a general way saw that the duty was performed. But the school was a private affair and the pupil's parents paid the teacher for his services. As anyone could open a school and no special qualifications were demanded, incompetents and failures in other walks of life sometimes undertook, as in our times, the work of educators, with the result that the teacher was not always held in high esteem. Instruction was not given in a single building as with us. Physical training was given in the palestra, a kind of open-air gymnasium. Mental training was given in the didascaleum, or music school, probably situated in the immediate neighborhood of the palestra. It was usually in the home of the teacher or in a public building, depending upon the number of pupils. Instruction was all individual. The equipment was very simple. The teacher sat higher than his pupils. They stood, or sat on stools, and had neither tables nor desks. The walls were unprovided with blackboards, maps, or any of the apparatus we associate with the school of today; but upon them hung reckoning boards, writing tablets, reading rolls, and lyres. The school day among the Greeks was long, lasting from early morning until late in the afternoon, but mental tedium was probably relieved by alternating work between the music school and the palestra. There were no long vacations, but the frequent festivals in honor of the gods provided many holidays. Tho the discipline of the Greek school was probably not very severe, corporal punishment was used. The educational

period was from seven to sixteen for the average boy. The girl received a training in domestic economy at home. Her education did not usually extend beyond this.

Home Training.—As in the case of most peoples, until the age of about seven the Greek boy stayed at home under the control of his parents and nurses. Greek women of the home were usually so ignorant that in all probability children were badly brought up, without proper attention to habit formation. During this period the child's mental acquisition consisted of a knowledge of the rudiments of religion, morals, and manners. Physically he was developed thru play, and it is interesting to note that the games of the Greek children were practically the same as those of our children. The girls played jacks, jumped rope, played with dolls. The boys played ball and leap-frog, spun tops, rolled hoops. When the boy was sent to school at seven, he was put in charge of an old slave called a *pedagogus*, who went to school with him and stayed with him until his return home. The *pedagogus* was responsible for the boy's conduct. He was to see that he did not play truant, that he studied his lessons, and that he behaved himself properly. Sometimes he was the chief moral force in the life of the boy; sometimes he was chosen for this duty because he was fit for nothing else, and in that case he probably had little beneficial influence on the development of the boy's character.

The Palestra.—The aim of the training in the palestra was not mere strength of body, not even that in addition to grace of carriage and movement. The Greek never forgot the intimate connections between mind and body. Physical training had as part of its aim to make the body an efficient instrument to express the dictates

of the mind. The various physical activities were organized into the *pentathlon*, which consisted of running, jumping, throwing the discus, throwing the javelin, and wrestling. Wrestling was considered the acme of physical training because, in addition to bringing every muscle of the body into play, it supplied a mental training thru the need of quick perception and judgment. Dancing was also taught because of its value in making movements gentle and graceful, and because of its use in religious exercises. It did not resemble modern dancing, however, but consisted of rhythmical movements of the whole body. Finally, open-air sports played as large a part in Greek as in modern English education.

The Music School.—The aim of the music school was to give a knowledge of music, i. e., everything over which a muse presided. Music, in other words, was a synonym for our word culture. A boy began his school work, as with us, with instruction in reading, writing, and counting. Reading was a very difficult thing to learn and took a long time, as neither accenting nor punctuating had yet been introduced, and there was no spacing between words. The attention given to the subject, however, resulted in the Greek boy reading with remarkable accuracy and expression. Writing was taught by means of a wax tablet and a stylus. The stylus was an instrument pointed at one end with which to make the letters, and flat at the other end with which to erase them. After he had thus learned to write, the boy wrote on papyrus with pen and ink. Arithmetic with the Greeks, as with all peoples until the Arabs introduced the Hindu notation, amounted only to counting. The Greek system of notation consisted of their alphabet modified by diacritical marks, and like the Roman system was too cumber-

some for any of the higher arithmetical processes. All the ancients were skillful in using their fingers for arithmetical purposes. These elementary subjects were learned thru imitation.

The important subjects in a Greek boy's mental education were literature and music in the narrow sense. The textbook for his literary training was Homer, of which he was compelled to learn whole passages by heart. Homer was the Greek's Bible. From it the boy not only learned to speak, to read accurately, and to appreciate the choicest passages of literature, but also received his moral instruction. The aim of the literary training was to enable the boy to give expression to the feelings contained in the text, and it was in this way that the work was so closely associated with music. Music was not a distinct art as with us, but subsidiary to literature. The older boys had to improvise their own music to express the idea properly. Great emphasis was placed upon music as a source of moral training. Dictation and composition were probably other elements in the work of the music school. The important thing to notice is that, altho the method of learning was by imitation, the aim was always to develop the powers of expression, not merely those of receptivity.

Higher Education for Civic Service.—Elementary education occupied an indefinite period, according to the financial ability of the parents to keep the boy in school. At the sixteenth year the sons of the wealthy passed on to higher education, which carried with it the probability of being elected to positions of leadership. This higher education was under state control and supervision, of two years duration, given in the gymnasium, and was a preparation for military service to the state. The elements of the pentathlon were organized into a variety

of exercises of a more vigorous kind. The boys indulged in boxing and the *pancratium*, a combat in which any means of winning was justifiable. But, altho the boy's direct training was wholly physical, he received an indirect mental training of great value. The gymnasia were situated outside the walls of the city and in parks. These parks were rendezvous for statesmen, moralists, and exponents of new ideas. Between their periods of work in the gymnasium the boys went out into the park and listened to these men expounding their favorite themes. Too much emphasis can hardly be given to the value of the association of the boys with adult citizens engaged in their normal activities in their natural environment. They thereby learned moral standards thru contact with living, real examples; and were informally initiated into the customs, laws, and past experience of their people. Moreover, tho under strict supervision by an official moral overseer, the boys had a very wide liberty, attended the theaters and law courts, listened to discussions at banquets and in the market place, and participated in religious exercises.

Citizenship.—At eighteen, as the result of an examination into his physical and moral qualifications, the boy became an *ephebos*, i. e., a citizen novice. His father or, in case he was an orphan, the state, presented him with his arms and he took the ephebic oath of loyalty before the assembled citizens. For the next two years he received his direct military training, at first near the city in the use of arms, afterwards on the frontier in the duties of a soldier. He was also trained in the conduct of public affairs, and participated prominently in public festivals and religious ceremonies. At the expiration of that time, as the result of an examination upon the duties of citizenship, he became a full-fledged citizen and

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participated in the institutional education spoken of in the beginning of this chapter.

Results of Greek Education.—The results of Greek education were obtained by the use of a few subjects actively and intensively participated in by the pupils. The subjects that are considered so necessary to culture and discipline in modern education were not found among the Greeks in the best period of their history. There was little instruction in mathematics, none in foreign languages or in science. Even grammar and drawing were not introduced until later. It was, however, a learning by doing: the recitation of epic poetry, the singing of lyrics and playing of accompaniments, the physical exercises, all involved motor elements; and the intellectual training of the two years of association with adults consisted of discussions and watching men *in action*. It is a question, whether, in intellectual acumen, emotional appreciation, and volitional accomplishments, any other social and educational system produced a finer type of individual than the average Greek citizen of the Periclean Age. And, despite its many limitations, in what other society was there made a better solution of the problem of reconciling individual liberty with social stability?

THE NEW EDUCATION—THE SOPHISTS

Changes in the Social Life of Athens.—The Persian Wars resulted in a great expansion of all forms of human activity thruout Greece, but especially in Athens. Athens assumed the hegemony of Ionian Greece and became the metropolis of the Grecian world. Her trade and commerce grew rapidly, and, as a result, foreigners in large numbers settled within her walls to take advantage of

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the opportunities for acquiring wealth. These foreigners brought with them diverse customs, religious and moral views, and ways of looking at social affairs. From the conflict between these and the customs and traditions of the native citizens there resulted a tendency to question and reason about that which before had been accepted unthinkingly. Belief in the gods and their control over the affairs of men began to yield to a search for a more rational explanation of phenomena. This change was reflected in morals which, having lost a religious basis, were now unprovided with any basis; and in politics, where birth was yielding to wealth in the privileges of citizenship. Society was, in fact, in a state of flux. Moreover, the increase in governmental functions, the necessity of sending diplomats abroad and military and civil officials to the tributary states, offered a much greater number of opportunities for self-advancement to the individual, particularly to the keen-witted and unscrupulous. A parallel can be drawn between the social situation in Athens after the Persian Wars and in the United States since the Civil War. Only, whereas the chief opportunities for self-aggrandizement in our country since the Civil War have been in the world of industry, in Athens they were to be found in civil life, the only field of activity in which the Greek citizen engaged. And just as the great expansion in industrial life in our country caused a remarkable change in higher education resulting in the introduction of new subjects of study, many of them technical and vocational, so a similar change took place in the higher education of the Greek youth to prepare him for the changed conditions in social living. Moreover, just as with us the young men have flocked to the new teachers of science, causing the breakdown of the old classical

curriculum, so were the new teachers at Athens received with enthusiasm by the youth of that city.

Character of the Sophists.—These new teachers were called *Sophists*. They were learned, well-traveled men, usually non-Athenians who were attracted to the metropolis by the opportunities to teach. They were disliked by the conservatives chiefly because they accepted pay for their teaching. It will be remembered that the higher mental education of the Athenian youth was indirect, received in converse with the best of the citizens in the groves of the gymnasia and elsewhere. The aim of this indirect teaching was the formation of character, a process into which the old-fashioned Athenian believed there could enter no financial consideration. Another objection to the Sophists sprang from the content of their teaching, which we shall consider below.

Aim and Content of Their Work.—The aim of the education of the Sophists was to prepare the individual to conform to the changed social conditions and thereby secure his personal advancement. As there was no press in Athens, the chief way to secure influence as well as political and civic preferment was by speech. Hence the chief content of the education of the Sophists was the arts of speech, and Greek civilization owed much to them in the organization of these arts. They taught declamation and oratory, and out of the refinement of these as arts developed grammar and rhetoric. However, these were formal studies, and in their application the Sophists took their material from politics and ethics chiefly. It was their point of view in these latter subjects which gave greatest offense to the conservatives.

The Principal Source of Their Offense.—Protagoras, the chief of the Sophists, predicated as his fundamental principle, "Man is the measure of all things." Knowl-

edge must be individual for it comes thru the senses; and, as the senses of no two individuals are the same, there can be no such thing as principles or truths of universal validity. Each individual, therefore, must determine for himself what his attitude towards his neighbor, the state, and society shall be. The Sophists' method of teaching was chiefly the lecture system, the one calculated to develop a habit of ready acceptance rather than of independent thinking.

Social Results of Their Work.—The Sophists thus placed an extreme emphasis upon individualism. Whether the disintegration of moral standards which was synchronous with their work was the result of their teaching is a question. It might have been the result of the changed social conditions which tempted men into a scramble for self-aggrandizement. Men were, of course, glad to have a group of thinkers provide them with a philosophic justification for their views and actions. There can be no doubt, however, that their teaching expressed the change in the relation of the individual to the state. The view that the entire energy and, if necessary, the life of the individual were to be devoted to the welfare of the state gradually disappeared. (Whatever may have been the result upon society, their work broadened the intellectual horizon and enriched the mental content of the individual.)

Influence Upon Education.—Upon higher education the influence of the Sophists was profound. The emphasis was no longer upon education for civic duties, but for personal advancement and pleasure. Hence the training of the body in the gymnasium gradually yielded in importance to the training of the mind in the lecture room. The Sophists first introduced the intellectual elements into Athenian education. Tho they did not en-

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gage in elementary education, this did not remain unaffected. Literature and music remained the staple of instruction, but the study of literature for its moral content gave way to the criticism of literary form, and music as primarily a training in morals to music for pleasurable effect. In the palestra the severity of the training was much relaxed, and aimed at esthetic effects more than formerly. Education became more a matter of the schools, in which learning tended to supersede doing.

QUESTIONS, COMPARISONS, AND TOPICS FOR FURTHER STUDY

1. Contrast the place of play in Greek education with its place in modern education. Do athletics today hold a larger place in American education than did games in Greek education? What evils attend American athletics that were not present in Greek games, and why?

2. Compare the place of music in Greek education and in modern education. Is music taught as a science or an art in the elementary schools today? As which of the two should it be taught?

3. How did the length of the school day and school term of the Greeks compare with ours? Is our long summer vacation justified?

4. Compare the education of the Athenian boy during the ephebic period (16-18) with that of a continental European under military conscription (21-23).

5. Compare the influence of immigration upon American social ideals with its influence upon Athenian social ideals.

6. Compare the influence of the Sophists upon higher education in Athens with the influence of the teachers of science in the United States after the Civil War.

7. In what respects did the methods of the Sophists resemble the coaching schools for civil service examinations today?

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8. Compare the emphasis upon expression as a method in Greek education with the emphasis it receives in modern education.

9. What institution in American political life resembles the assembly in Athens? Upon whom have political institutions had the greater influence, the Greek or the American?

10. Does the state today exercise as much supervision over private schools as did the Greeks? What is the attitude of the state towards denominational schools?

11. Do modern social conditions justify the great emphasis upon knowing as compared to the emphasis of the Greeks upon doing?

12. What was the influence of the climate and topography of Greece upon the esthetic development of the people?

13. What, if any, social institutions or activities of American life today have a bad educational influence?

For Bibliography see page 48 at end of Chapter IV.

CHAPTER IV

GREEK EDUCATION (CONTINUED)

THE SEARCH FOR A NEW SOLUTION

Outline.—The Greek educational theorists, Socrates, Plato, and Aristotle, sought a new solution for the problem of reconciling individual liberty with social stability. Socrates found this in a morality based upon knowledge, the elements of which exist in the consciousness of every man. A new method by which to formulate this knowledge was necessary and this was provided by Socrates in his “conversational quiz.”

Plato maintained that the knowledge demanded by Socrates could be obtained only by the philosophers who could pierce behind what was phenomenal and attain to the real. He suggested a social system entirely controlled by the state, in which each individual would be educated for the place and work for which by nature he is best fitted.

Aristotle suggested an education to prepare the individual to guide his conduct in association with his fellow men by reason. Up to seven, the education would be almost exclusively physical; up to fourteen it would be devoted to the irrational part of the soul and aim at good morals; up to twenty-one it would be devoted to the rational part of the soul and aim at intellectual advancement.

After Aristotle, Greek education followed two lines of development: one resulted in the establishment of the rhetorical schools which prepared for the practical life; the other in the establishment of the philosophical schools which prepared for the speculative life. The schools in the course of time coalesced into the Greek universities, the chief of which were at Athens and Alexandria.

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A. SOCRATES (469-399 B.C.)

Problem of Socrates.—The Sophists, as we have seen, encountered the bitter opposition of the conservatives in Athenian society. And yet it was evident that the old institutional basis of morals had gone forever. It was equally evident, however, that the negative attitude of the Sophists could not adequately fill the void. The problem of the reconciliation of individual liberty with social stability and welfare had still to be solved. Socrates undertook to find a new basis for a solution in a morality founded upon knowledge.

His Solution.—Socrates accepted the fundamental postulate of Protagoras, "Man is the measure of all things." Before using a measure of any kind one should understand it. Therefore, said Socrates, "Know thyself." If one attempts to do that by reflection upon his own experience and that of others, he will soon discover that, however individual his perceptions may be, they have more points in common with the perceptions of everybody else than points of difference. In other words, the materials out of which are to be formulated "whole thoughts" and principles of conduct of universal validity and general application exist in the consciousness of the individual.

The Aim of Education.—Hence when Socrates accepted the dictum, "Man is the measure of all things," it was not what was individual in man, but what was universal; the truth was not the particular opinion of the individual man, but the knowledge that is common to all men. To lead the virtuous life it is necessary to have this knowledge of universal validity. Knowing the right will be followed by doing the right. Knowledge is virtue. The aim of education is:

1. To show that knowledge is at the basis of right action in all the arts, including the art of living, which chiefly interested Socrates. Tho not everybody has the knowledge of the right, everybody has the power latent within him to arrive at that knowledge.

2. To develop that power, viz., the power of correct thinking.

His Method.—This cannot be done by the lecture method of the Sophists, which Socrates considered gave only information, second-hand knowledge. He substituted, therefore, his conversational quiz:

Socratic Dialectic	{	Ironie—destructive element
		Maieutic—constructive element

In practice, Socrates would ask someone his opinion, usually about some chance event or matter of daily experience which he could turn to account as illustrating a general principle of conduct. If the opinion were wrong, Socrates by a series of questions would lead the individual either to a *reductio ad absurdum*, or to a contradiction of his original statement. This was the Socratic *ironic* element. Often by another series of questions he developed in the mind of the individual the correct idea of which his original opinion was only a part. This was the Socratic *maieutic* element. (*maieutic*, giving birth to; Socrates called himself an intellectual midwife.) The individual was first led from unconscious ignorance to conscious ignorance and then to clear and reasoned truth.

Results of His Work.—Socially the aim of Socrates was to rid society of the influence of mere opinion and replace it by a knowledge of the general truths that underlie right conduct in all the activities of life. In the individual he aimed to develop the power to think for him-

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self, to arrive at his own knowledge, to attain to free personality. In education his work resulted in a great emphasis upon knowledge and, moreover, upon the practical knowledge that leads to correct action in everyday life. To Socrates the study of nature and the natural sciences was fruitless; only man and his actions and productions were worth studying. His method became the dominant one in higher education. It is to be noted, however, that, as used by Socrates, the conversational quiz can be applied only to those subjects whose content is found in the experience of the individual. One can teach psychology or ethics in that way, but not literature, history, or science. Moreover, there is a danger that its use, especially in unskillful hands, may lead to quibbling rather than to truth. This use of the method by Socrates led to his undoing. As the years went by the number of men convicted of hypocrisy by its use and held up to public ridicule increased until they were sufficiently numerous to bring about his downfall upon the false charge of denying the existence of the gods and corrupting the morals of the youth.

B. PLATO (427-347 B.C.)

Why We Study Plato.—Socrates wrote nothing, nor did he found any educational institution. What his educational views were are discernible by a comparison of the works of his two disciples, Xenophon and Plato. It is sometimes hard in Plato's work to determine what is Socratic and what is Platonic. But in the dialogue called the "Republic," his work on the ideal state, Plato in his ripe manhood contributed the first systematic exposition of the educational problem written in the West, an exposition which is for all times full of suggestiveness from the standpoint of educational theory and

practice, an exposition in which it is predicated that education is not only a function of the state but the chief function of the state as well. In "The Laws," a description of the best state, written in his old age, Plato rejected many of the political and educational ideas in the "Republic" and proposed a solution based upon the old conservative Greek view.

The Philosophic Basis of His Educational System.—

Plato accepted the fundamental principle of Socrates, viz., "Knowledge is virtue." Socrates had been chiefly interested in the practical problem of developing in the individual the power to obtain knowledge. Plato was interested in the metaphysical problem of the nature of knowledge. What is knowledge? That which conforms to reality. But what is reality? The answer to this brings us to the very heart of Plato's philosophy. Reality cannot be the merely phenomenal, that which is transient and temporary, but must be that which is permanent, that which is not dependent upon sense perception for existence. Everything phenomenal is patterned upon an ideal, so that however much the individuals of any class of phenomena, e. g., man, may differ in details, they are all alike in their resemblance to the ideal or idea upon which they were modeled and the real world as opposed to the phenomenal is the world of ideas. We come to a knowledge of the phenomenal world by means of our five senses, but to pierce beyond the world of phenomena and come to a knowledge of what is real requires the possession of a sixth sense. Only a very few, viz., the philosophers, possess this sixth sense; hence only they know what is real as against what is apparent. Only they, therefore, are fit to rule.

From what has just been said, it is evident that any phenomenal thing functions properly when it attains

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the greatest possible resemblance to its idea. There is a specific good for every phenomenal existence, but the supreme good, the *summum bonum*, is the abstract idea of goodness which is characteristic of all kinds of good things. The knowledge of the supreme good is virtue; to attain that knowledge is the aim of life; to develop the powers to attain it is the aim of education. Now an analysis of the idea of man shows that he is made of three elements:

<i>Elements</i>		<i>Function</i>	<i>Virtue</i>
Man	Appetites Passions Intellect	Support Defense Control	Temperance Courage Wisdom

When these three elements act harmoniously, i. e., when they illustrate their accompanying virtues, when the appetites are devoted merely to support and not indulgence, when the passions are devoted to self-protection and not foolhardiness, when the intellect is used exclusively for wise guidance, then the individual functions properly and attains to his end, virtue. Now "the state is the individual writ large." Hence, if we analyze the idea of the state, we find three elements corresponding to the three elements in the composition of the individual. These are:

<i>Elements</i>		<i>Function</i>	<i>Virtue</i>
State	Artisans Soldiers Rulers (Philosophers)	Support Defense Control	Productivity Honor Wisdom

The state will function properly, therefore, and attain its end, justice, when those three classes act harmoniously, i. e., when the artisan class supports society, the soldier class defends it, and the philosophers rule it.

The Educational System in the "Republic."—What system of education should be organized to attain these ends, viz., virtue in the individual and justice in the state? Plato's answer to this question is to suggest an ideal society organized as an aristocratic socialism. The state must control everything. It determines who shall marry, marriage being a mating merely to breed citizens. Family life is abolished and the child at birth becomes the property of the state. The state decides whether or not it shall be permitted to live. It is not even nursed necessarily by its own mother. The organization of education Plato took from Spartan practice; the content from Athenian practice. Until seven years of age the child is developed physically thru play and learns morals and religion. From seven to sixteen it receives in the state school a training similar to that given to the Athenian youth in the palestra and music school, with slight modifications of content. Literature is to be purified of everything tending to have an immoral or irreligious influence; gymnastics and music are to be practiced primarily with the view to improve the soul. At sixteen, the first differentiation in society takes place. (Those youths and maidens—for the same education is given to both sexes—who have shown that they are governed chiefly by their appetites are drafted off into the artisan class. The rest continue to be educated until the age of twenty in physical training and military discipline, and then a second differentiation takes place. Those among them who have shown themselves governed chiefly by their passions are drafted

off into the soldier class. The remainder continue to be educated in the sciences, arithmetic, geometry, astronomy, and music, i. e., the *quadrivium* of the medieval period. At thirty a third differentiation takes place. Those who have shown themselves governed merely by their intellect are put in charge of the subordinate positions in the state. The few remaining persons, who possess in addition the sixth sense for ideas, continue to be educated for five years more in dialectic philosophy, i. e., a knowledge of "reality." At thirty-five they enter the service of the state in their special work of ruling and continue until fifty. Then they retire from active service to devote their remaining years to study and reflection, the highest life of all.

Value of Plato's Educational Ideas.—The scheme of education advocated in the "Republic" is based upon the fundamental ethical conception that every person ought to be engaged in doing that which he is by nature best fitted to do. It follows that education should discover in the individual what he is best fitted to do and then provide the training which will enable him to do it. The individual will thereby not only attain to personal happiness but render his best service to society. The possibility of a wrong diagnosis is counterbalanced by the possibility of the elimination of the misfit. It is true that Plato's division into classes was a narrow one, and that the action of the human will in enabling the individual to make his place in society rather than to take the one assigned him is minimized. But the principle of selection was based upon worth and that must always be the basis for a stable and efficient organization of society. Practically, the Platonic solution of the problem of the reconciliation of individual liberty with social stability would result in the suppression of

the individual; but theoretically it would result in the best harmony of the two factors in the problem. Educationally, his insistence upon the acquisition of the theoretical knowledge at the basis of every practical art and his assignment of an equal place to women in the educational scheme put Plato far in advance of his time. But in his overemphasis upon knowledge, in his neglect of the development of right feeling as necessary to make right knowing result in right action, Plato did not rise even to the ideas of his own time. It was, in fact, because he was out of sympathy with his time that the "Republic" had practically no influence in his day. But in its emphasis upon the contemplative life as superior to the civic life it paved the way for Christian asceticism, and its vision of the world of ideas in turn provided the early Christian philosopher with a philosophic basis for many of his "visions."

C. ARISTOTLE (384-322 B.C.)

We study Aristotle (1) because he had a greater influence on subsequent times both in the thought life and in education than any other man, (2) because he represents the culmination of Greek intellectual life.

The theoretical side of Aristotle's views on education is found in the "Ethics," but the practical and more important part is found in the "Politics." These books are written as scientific treatises and have not, therefore, the literary charm of Plato's dialogues. The "Politics" is a fragment. The last part of it, that dealing with higher education, either was not written or was lost.

His Relation to Plato.—Aristotle was a disciple of Plato, but he differs from Plato in his solution of the

problem of the reconciliation of individual liberty with social stability. Aristotle denies the validity of Plato's fundamental postulate that "knowledge is virtue." He insists that virtue is an accompaniment of doing, not of knowing. His denial of Plato's position is based upon his rejection of Plato's theory of reality. Abstract ideas for him have no existence save as forms, and we can attain to no knowledge of them save as they are embodied in concrete objects, and by the use of our five senses. Since reality does not consist of ideas, man's highest possible attainment is not the possession of a knowledge of ideas, nor is the end of his education the securing of such knowledge. Virtue is attained when a thing acts in accordance with its highest function. Now the highest function of man is reason, hence to attain his end, his *summum bonum*, he must live according to reason. But man is a social animal. Virtue and happiness will, therefore, consist with him in acting in association with his fellow men according to those principles of conduct which reason tells him are right.

His System of Education.—What system of society and of education will best realize this desideratum? As the result of a comparative study of a very large number of the constitutions of states which existed in his day, Aristotle in the "Politics" concluded that, tho monarchy is theoretically the best form of government, democracy is the form most likely to be exercised for the general welfare. But it was democracy in the purely Greek sense, a city state based upon slavery in which the industrial classes should be excluded from citizenship. Altho a foreigner, Aristotle's conceptions both of society and of education approach much nearer the Athenian ideals than do those of Plato, who was a pure Athenian. Aristotle is one with Plato in making the

education of its citizens the chief means of securing the welfare of the state; but because he rejects Plato's conception of the ideal state, his educational scheme necessarily differs from Plato's. He condemns Plato's destruction of the family and family life and also the system of identical education for men and women. As man and woman have each a different highest function, they must have different education. The maintenance of the family must have as a natural corollary the education of the child by the parents. His entire education until seven years of age is under their exclusive control, and his moral education is always to be a part of their duty. After seven the child's general education is to be public and controlled by the state. What is the nature of that education?

Aristotle asserted that man was made up of two parts, body and soul, and that soul was composed of an irrational element, i. e., appetites, desires and passions, and a rational element, i. e., intellect. Hence education has a threefold aspect, physical, moral, and mental. Formal school training should continue from seven to twenty-one and be divided into two periods by puberty. The first period should be devoted to the training of the irrational side of the soul and the second to the rational. Aristotle was essentially practical in his point of view and borrowed his content and method chiefly from the prevailing system at Athens. Physical training, to which attention was first given, was to be secured thru gymnastics and to have as its aim not merely strength and grace of body, but the development of habits of control, of self-restraint. Moral education, i. e., the education of the irrational element of the soul, to which attention was next given, was to be attained thru literature and music. In moral training practice is always to pre-

cede theory, doing the thing sought before reasoning about it. Then when habits of right feeling and acting have been generated, the individual must be taught the rational basis for them. Thus will goodness of character, which is based upon habituation and which is attainable by all citizens, precede goodness of intellect, which results from the instruction of the rational element and is attainable only by the leisure class. What the nature of instruction of the rational element would be we cannot exactly determine, as that part of the "Politics" either was not written or was lost. But we judge from references in other parts that it would emphasize mathematics, the natural sciences, and dialectic.

Influence of Aristotle.—Aristotle searched for truth in nature and society. He maintained that it was to be got thru observation of their phenomena confirmed by reflection. The practice of this inductive method made him the greatest scientific thinker that has ever lived, and he laid the foundation of the sciences of physics, mechanics, physiology, and politics. As a basis for thought in all these he developed his "Organon," the science of the laws of thought, i. e., logic. Unfortunately for western Europe practically all his works except the "Organon" were lost to it. Hence the Middle Ages, which revered his name, were controlled in intellectual life by his deductive logic, and deduction is a method of confirmation, not of discovery. This fact added to the emphasis which that period gave to authority and tradition. But Mohammedanism, which was much influenced by his philosophy, brought it into western Europe via Spain. In the thirteenth century it was at first used by the schoolmen to justify existing beliefs, but its use led to an encouragement of reasoning dangerous to both authority and tradition. Upon his own time Aristotle

had no more influence than Plato. The day of the city state, from which he drew his ideals, had passed, and with it went the old Hellenic ideal of the citizen-man. Man now existed for himself only, and social stability could be secured only by authority from without.

RISE OF THE GREEK UNIVERSITIES

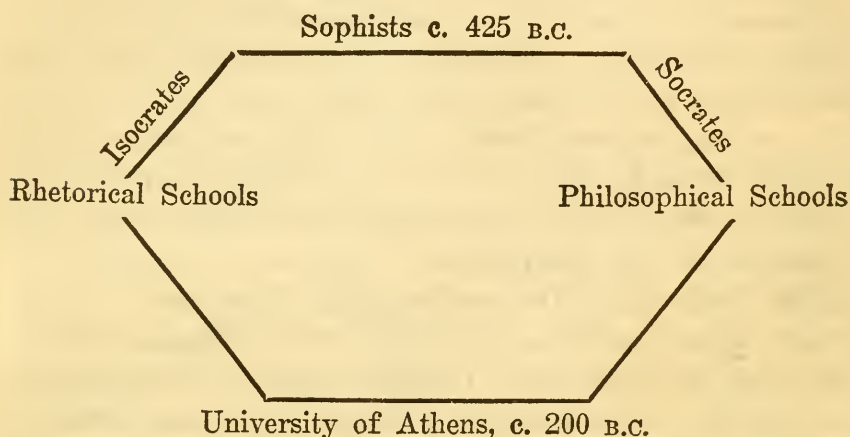
Triumph of Individualism.—Athens was ruined by excess of individualism. All efforts to control the tendencies of the times proved futile and Aristotle's was the last attempt at a solution of the problem of the reconciliation of individual liberty with social stability. Philosophy, which had hitherto tried to formulate a practical ideal for social living, contented itself solely with the happiness of the individual. This is as true of the noblest Stoic as of the most sensual Epicurean. Education, which will always conform to a change of social and political ideals, now devoted itself to the development of the individual for personal happiness without reference to social relations. This was not accomplished without a struggle on the part of the finer spirits among the Greeks; however, it became a fact long before the Roman conquest. We shall now study that change.

Course of Development of Greek Education After the Sophists.—The new education introduced by the Sophists started two streams of influence which resulted in a reorganization of higher education. One flowed thru Socrates as a channel and resulted in the establishment of the philosophical schools. The other flowed thru Isocrates and resulted in the rhetorical schools. These two institutions became united in a loose manner in the course of time and to the institution thus formed the term "University of Athens" has been given by mod-

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ern writers, tho this name was unknown to the ancients themselves.

The Rhetorical Schools.—The more important of these two institutions was the rhetorical school. The work of the Sophists was of a desultory nature. Each Sophist was a free lance who taught without reference to the work of any other. Isocrates, who flourished in the generation after Socrates, organized the work of the Sophists



into an orderly, well-graded system. In his school the student was taught the same subjects as in the schools of the Sophists, but he passed from subject to subject as the result of careful preparation. Isocrates maintained that his aim was to enable a man to think clearly and express his thoughts properly, not merely to win in argument, as was the aim of many of the Sophists. His school was very successful, attracted many of the men who afterwards became leading statesmen, and served as a model for others. Its fame helped to make Athens the intellectual center of the ancient world. The system that grew up was very similar to the system of private schools and academies that has grown up in almost

all large American cities. The school aimed to prepare a man for the vigorous public life which characterized the Greek citizen in the fourth century B.C. As the interest which is exerted in public life today by newspaper, pulpit, bar, and platform was exerted then exclusively by the public speaker, the power of effective speech and the imparting of the knowledge of the day to make a successful man of the world were the ends sought. Tho at first rigorous and thoro, with the loss of political independence the work of these schools became more and more formal and stereotyped. Nevertheless, they flourished thruout the whole classical period.

The Philosophical Schools.—In the century preceding the Macedonian conquest the very turmoil of public life which attracted the active spirits of the day repelled the more timid and contemplative.

The emphasis placed by both Plato and Aristotle upon the speculative life in sequence to the practical life, as the highest attainment, was now placed upon the speculative life without reference to any practical consideration. Four great philosophical schools were founded in the fourth century, viz.:

The School of the Academy, founded by Plato, 386 B.C.

The School of the Lyceum, founded by Aristotle, 335 B.C.

The School of the Stoics, founded by Zeno, 308 B.C.

The School of Epicurus, founded by Epicurus, 306 B.C.

These became less and less concerned with the affairs of practical life and developed into kinds of religious brotherhoods which absorbed much of the devotion that had formerly been given to the city state. The schools at first consisted merely of the master and his disciples. But when the founders of these schools died, they be-

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queathed their wealth and manuscripts to the schools and selected or arranged for the election of successors to the headship, called "scholarchs." These endowments provided the bases for permanent institutions, additional income for the support of which was obtained by charging a fee for membership in the schools. The schools attracted adherents from all over the civilized world, many of whom upon coming to Athens found themselves unprepared to enter them. The result was that teachers engaged in preparing students for entrance became associated with the schools. In most instances, after the death of the founder research and creative work ceased. The aim became more and more to set forth the views of the founder; and before the beginning of the Christian era the work had become as formal and artificial as that of the rhetorical schools.

The University of Athens.—In the meantime great changes had taken place in the education of the Athenian youth. We have seen that, as a result of the emphasis placed upon intellectual education by the Sophists and of the trend towards individual self-seeking, the physical training in gymnastic and military drill looking towards service to the state began to lose its importance. The period of service was first reduced from two years to one; and after the Macedonian conquest, when there was no longer an Athenian state to serve, attendance upon the gymnasium was made wholly voluntary. Admission to the ephebic corps was granted to foreigners and the corps became a kind of social institution with a military flavor. For the compulsory attendance formerly demanded of the ephebes at the gymnasium there was now substituted compulsory attendance at the lectures of the philosophical schools in addition to voluntary attendance at the rhetorical schools. Finally when, because of the

danger due to the wars between Macedon and Rome, the schools of the Academy, the Lyceum, and Epicurus, which had been without the walls, followed the Stoics into the city, the Athenian Assembly granted public support to them and began to exercise a control over the selection of the Sophists or professors. The union of the philosophical and rhetorical schools became more pronounced as the result of the practice of the early Roman emperors of endowing chairs of rhetoric and of philosophy. The years of attendance of a student were prolonged often to six or seven; and student life resembled college life today, especially in its extra-scholastic features. The University of Athens remained the stronghold of paganism after the advent of Christianity, and its decline was rapid after Constantine made Christianity the state religion. Finally, in 529 A.D., it was suppressed by Justinian.

The University of Alexandria.—The University of Athens was not the only Greek university of the ancient world. As the result of the conquests of Alexander, Greek civilization spread thruout the East; and tho it was most apparent in its externals, such as temples, theaters, and baths, the Greek language and Greek culture conquered the minds of men more effectually than their arms had conquered governments. Greek universities arose at Rhodes, Pergamus, Tarsus, and Alexandria; but of these only the University of Alexandria competed in influence and prestige with that of Athens. The first three Ptolemies were enlightened statesmen who did much for the advancement of learning. They instituted a movement for the collection of manuscripts such as has never been equaled in history except possibly during the Renaissance. As a result there was founded at Alexandria in 280 B.C. the library which was destined

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to become the greatest in the ancient world : according to some accounts, it contained at one time more than 700,000 “rolls” of manuscripts; and parts at least of it survived until Alexandria was captured by the Moham-medans in 640 A.D. This library attracted scholars from all countries. At about the same time the museum was founded, an institution resembling the great scientific research institutions of today; and investigators from all over the world were invited to study there at the expense of the king. Much of the work of Euclid in geometry, Archimedes in physics, and Eratosthenes in geography and astronomy was done there. The Ptolemies also endowed numerous chairs of rhetoric and of philosophy which, with the library and museum, formed the university. Tho in its earlier period it was renowned chiefly for science, in the later period, especially after Christianity became a force, it was the center for philosophical speculation. This naturally resulted from its being the meeting place of Greeks, Jews, Egyptians, and scholars from the Orient. Here the Hebrew scriptures were translated into Greek (the Septuagint) c. 250 B.C.; here Philo the Jew attempted to harmonize the Hebrew scriptures with Greek philosophy; here the early Christian Fathers established their great “Catechetical School”; and here most of the heresies that rent the new religion were developed. Nevertheless, in this later period most of the work, especially in grammar, rhetoric, and literature, was formal and artificial; and in philosophy it consisted of fruitless commentary.

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QUESTIONS, COMPARISONS, AND TOPICS FOR FURTHER STUDY

1. What was Socrates' error in his statement that "to know the right is to do the right"?

2. What better methods are used in education today than the Socratic quiz for the development of concepts or "whole-thoughts"?

3. Compare the state control of marriage in Plato's "Republic" with that suggested by modern eugenists.

4. Compare the selective process to determine one's life work suggested in the "Republic" with the modern principle of vocational guidance.

5. Does the view of women's education held today conform more closely to the view of Plato or Aristotle?

6. In what respect did Aristotle advocate the modern principle of "learn to know by doing"?

7. In what respects does the multiplication of religious sects today resemble the founding of philosophical schools among the Greeks?

8. Compare the development of the University of Athens with that of an American university like Columbia.

9. How did the rhetorical schools among the Greeks resemble the academies of our country?

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10. Compare the spread of the use of the Greek language after the conquests of Alexander with the use of French in the eighteenth and nineteenth centuries.

11. Compare the work of the Egyptian King Ptolemy with that of Andrew Carnegie in the advancement of learning.

CHAPTER V

ROMAN EDUCATION

Outline.—The mission of the Romans was to organize institutions whereby the ideals of the other peoples might be realized. The Jew furnished Western civilization with its religious ideal; the Roman organized it into an institution which saved Europe from barbarism. The Greek furnished the ideal of justice; the Roman made it concrete in a system of law upon which European civilization is today founded.

Previous to contact with the Greeks the Romans gave their boys a practical and civic education. This was done informally by means of the activities of the family, the forum, and the camp. After assimilating Greek culture, the Romans organized their education into: (1) elementary, given in the school of the *litterator*; (2) secondary, given in the school of the *grammaticus*; and (3) higher, given in the school of the *rhetor*. A young Roman might afterward attend a university.

Contributions of Rome to Western Civilization.—The Romans had the greatest genius for organization and administration of any historic people. Intensely practical and without high ideals, their mission in history was to organize institutions whereby the ideals of other peoples might be realized. If from the Jew we have received our religious ideal, it was the Roman who organized it into an institution which saved Europe from barbarism. If the Greek furnished the ideal of justice, the Roman made it concrete in a system of law upon which European civilization is founded today. The universal

empire organized by Rome was the instrument by which Greek art, literature, science, and philosophy were spread among all peoples.

The Roman View of Life.—The Roman's point of view was objective, never subjective. He was impatient of abstraction and dealt only with the concrete. He measured the value of everything by the utilitarian standard of results. Every relation of life was to be organized on practical principles. Even religion, which discloses man's highest aspiration, was with the Roman chiefly a bargaining with the gods, a practical device for everyday living. He was essentially a doer, not a thinker nor a man of emotion. He represents chiefly the life of the will as the Greek represents chiefly the life of the intellect and feelings. He lived for his state and was never able to think of the man as separate from the citizen. He solved the problem of the reconciliation of individual liberty with social security by emphasizing state control. But the surrender of the individual to the state was voluntary, not compulsory.

Institutions of Rome Which Educated.—1. *The Family.*—The very basis of Roman life was the family. In it the mother occupied as honorable a position as the father and woman's place in Roman life was far higher and more influential than among the Greeks. Unlike the Greek male, the Roman lived much at home; the hearth was his most sacred spot. All members of the family were strongly bound together and, while the Greek tried to make his son independent as soon as possible, the Roman's control of the members of his family ceased only with death. The influence of this family life upon the development of character cannot be overestimated.

2. *The Camp.*—The Roman was always at war and

the first duty of a father was to prepare his son to take part in war. This was not an academic training in a gymnasium as with the Greeks. The Romans never had gymnasia. The father taught his son to ride, swim, and use the spear; and when the boy reached the age of manhood (sixteen), he learned the use of arms in the camp itself. When not engaged on the farm he was to be found in the camp.

3. *The Forum*.—Thruout the republican period the forum exercised a great educative influence upon the Roman youth. It was there he heard the ideals and duties of the citizen set forth. Unlike the Athenian youth, he heard no discussions on abstract questions of life, morals, law, or politics, but the concrete problems before the state. And it is to be noted that in the early period all free Romans participated in this life; for until the great conquests glutted the market with slaves, manual labor in agriculture was not despised.

4. *Religion*.—With the Romans religion was a different thing from that of the Greeks. Their gods did not have human attributes and wish to be housed in beautiful temples and placated thru such joyous activities as dancing and singing. Religion had no influence upon the esthetic or intellectual life of the people. There was a god for every human activity, mysterious, stern, and inexorable, demanding his tribute of sacrifice. But these impersonal deities, at least until they were identified with the gods of the Greeks, did not exemplify human weaknesses and had a distinctly ethical influence. The sense of duty, not beauty, was developed by the Roman religion.

Periods of Roman Education.—The social and educational history of Rome falls into two periods. Tho no date can be set as marking the division of the two

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periods, for convenience the line may be drawn at 146 B.C., when Greece was conquered and made a Roman province. In the earlier period Roman life was as described above and education was controlled by Roman ideals and methods. Before the close of that period, as the result of the conquest of southern Italy, Roman life had become influenced by contact with the Greeks. In the second period Rome took over Greek culture nearly *in toto*, and the content and form of education, tho not its ideals, were Hellenized. We shall now consider the education of the first period.

A. EARLY ROMAN EDUCATION

The aim of Roman education was to produce a loyal Roman prepared for the practical duties of life. It was an affair entirely of the family, in which the father trained his son for the duties of the man and citizen, and the mother trained the daughter for the duties of the woman and housekeeper. As in all systems of family education the emphasis was upon the moral side of life, upon the development of character. The result was that the Roman was distinguished by the homelier and sterner virtues: piety, manliness, courage, gravity, honesty, prudence. Associated with this moral training was a physical training to produce a hardy man and soldier. But the physical exercises of the Roman boy were never organized into a system and given in an institution, as with the Greeks; and to have aimed at beauty of form and grace of action would have been considered effeminate. The intellectual element in Roman education was small. The boy was taught to read, write, and count by his father. Biography had a most important place, and the stories of the lives of the heroes who had served

Rome reinforced the work of the home in developing the Roman character. The Laws of the Twelve Tables, the fundamental legal code, had to be memorized by every Roman boy; but the influence upon him was not comparable to that of Homer on the Greek boy. Except for the Twelve Tables no literary element, and, except for the national songs and religious hymns, no musical element appeared in this education. Art, science, and philosophy were unknown; culture for its own sake was scorned.

The method of Roman education was direct imitation—first of the father, then of the hero. The Greek believed in placing the boy in an environment of beauty, refinement, and culture in word, deed, and object, and relied upon the assimilative power of the mind to assist towards the desired end. The Roman believed that the only way to learn any activity was to do it in imitation of a concrete model and to do it often enough to form a habit. When that was accomplished the end was attained. To instruct afterwards in the rational basis of habits never occurred to them.

The Period of Transition.—Such was the education of the Roman boy during the first period. But long before the date set for the closing of that period a change had begun to take place. Quite early in the period the *ludus*, a primary school, arose, to which some Romans sent their boys to learn reading, writing, and counting. In no wise was the emphasis upon family training lessened, for it was only these formal subjects that were learned in these private schools and not the habits and duties of the man and citizen. But this education sufficed only so long as Rome remained a local community. When it had conquered the whole of Italy and come in contact with alien and superior civilizations, a broader culture

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was essential. But the change was a very slow one. Livius Andronicus, a Greek slave from southern Italy, opened one of the first schools of a higher grade than the *ludus*. As Latin literature had hardly begun, he translated the *Odyssey* into Latin, c. 250 B.C., and thereafter that was the textbook in reading and literature for the Roman boy. Other Greeks followed his example and opened schools in which a knowledge of Greek literature by means of translations and an elementary knowledge of the Greek language were imparted. Gradually these translations—and eventually Greek literature itself—supplanted the memorizing of the Laws of the Twelve Tables as the intellectual element in the Roman boy's education. But these schools were all private undertakings without any generally accepted system of work, and they were attended by only a few of the youths of the upper classes.

B. THE HELLENIZED ROMAN EDUCATION

Absorption of Greek Culture by the Romans.—After the conquest of Greece by the Romans, 146 B.C., a delight in things Greek spread thruout Roman society. The conquerors had robbed Greece of many of her treasures in books and art and brought them to Rome. Greek teachers of grammar, rhetoric, and even philosophy emigrated in large numbers to the metropolis to open schools. In all history there is no instance of a more complete imitation of the culture of one people by another than that of the Greek by the Romans. They borrowed Greek religion, philosophy, art, and literature—at least in form. Naturally they borrowed the system of education upon which all this culture was based, but in doing so they organized it into a system superior to

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that of the Greeks. It must always be remembered, however, that this assimilation was a slow process, due to the strong conservatism of the Roman character and the active opposition of many influential men. Unlike the rapid conquest made by the Sophistic education in Athens or by scientific education in our own country, the movement required a century to complete its work. The publication of Cicero's book, "*De Oratore*," 55 B.C., marks fairly well its final triumph. The system of education as then organized remained with few modifications until the close of the empire.

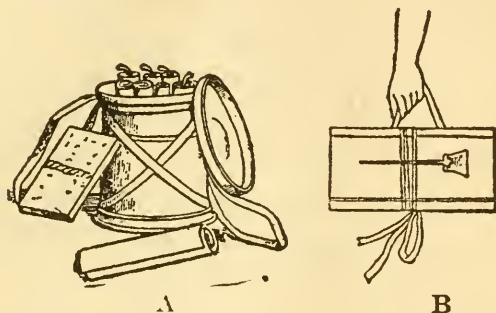
The following diagram is a graphic statement of the Roman system of education:

<i>Period of Education</i>	<i>School</i>	<i>Age</i>
1. Elementary	<i>Litterator</i>	7-10
2. Secondary	<i>Grammaticus</i>	to 16
3. Higher	<i>Rhetor</i>	16 on

The Elementary School.—The school of the *litterator*, i. e., teacher of letters, was the old *ludus*, to which the Roman boy was now sent to acquire the elements of learning, usually in charge of a pedagogue, as at Athens. Like all Roman schools of the republican and early imperial periods, it was a private institution opened in a room of a building or held even on a porch. As no qualifications for teaching were demanded, it was usually presided over by a freedman who was poorly paid and had a low social standing. The equipment was poor and the teaching probably of the same quality. Reading, writing, and counting were taught by the same methods as in the Greek schools; and as soon as the boy could read fairly well he was sent to a grammar school. No Greeks taught these primary schools; and many Roman boys never went to them, but received their elementary training from a tutor at home.

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The Grammar School.—The school of the *grammaticus* was so called because, as with us, grammar was the chief subject of study. But grammar had a much wider sig-



SCHOOL MATERIALS FROM WALL PAINTINGS

A—Wax tablet and *capra*, containing rolls or books. B—Wax tablet with *stilus* tied to it



PUNISHMENT

From a painting at Herculaneum

nificance than with us. It included the study of literature as well as language, and these schools were *par ex-*

cellence literary schools. At first they were maintained wholly by Greeks, who devoted themselves almost exclusively to giving instruction in the Greek language and literature; but about 100 B.C. Lucius Ælius Stilo opened a Latin grammar school, and from that time it was customary for the Roman boy to attend both. Reading, composition, and grammar formed the curriculum: grammar meant the study of the form and content of all Greek and Latin literature, didactic and artistic; so besides poetry it included geography, history, some mathematics and natural sciences, music, and mythology. As to content, probably for the most part these subjects were superficially studied. Minute attention was given to the form of Greek and Latin writers as models for correctness of expression in writing and speaking. Quintilian considered the power of imitation and memory as the most critical evidences of ability in a prospective orator. Homer always remained the chief author to be studied in the Greek grammar school, and in the imperial period Virgil was the chief author to be studied in the Latin grammar school; but selections from a wide range of authors were used in both schools. Two subjects were not introduced from the Greek schools, viz., dancing and gymnastics.

The method of teaching was by explanation and dictation, the method of study was chiefly the memoriter. The aim was to give a mastery of expression in reading, writing, and speaking to prepare the boy for the work of the rhetorical schools. These grammar schools were well-equipped institutions like those of Greece, and the teachers received good incomes and had a good social standing. The discipline of all the Roman schools was severe, the rod being used freely. The school day was long, from early morning until late afternoon. But, in Italy

at least, there was a summer vacation from about June first until October first. Moreover, the *Saturnalia* corresponded to our Christmas vacation, the feast of Minerva to our Easter vacation, and there were no school sessions on many festival days.

The Rhetorical School.—When he completed the grammar school, at about the age of assuming the *toga virilis* (the dress of a man), the education of the Roman boy ended, unless he was destined for a public career. If that was so, he entered the school of the rhetor and remained there for a period depending upon his ability and interests, probably in most cases about three years. The rhetorical schools were much more slowly established than the grammar schools and became numerous only about the beginning of the imperial period. At first there were only Greek rhetorical schools; but during the first century B.C. Latin rhetorical schools were established, and in course of time superseded the Greek in importance, appealing as they did to a much wider constituency. In the late republican and early imperial periods it became customary among the higher classes to send youths to Greece for their rhetorical training.

Aim, Content, and Method of Work.—The aim of the rhetorical school was to prepare the individual for the life of public affairs. During the republican and early imperial periods, before freedom disappeared, this training for service to society was vigorous and effective. With the Roman the orator was the well-educated man. Therefore, tho the work of the rhetorical school was chiefly devoted to the arts of speech—rhetoric, declamation, and debate—yet, if we are to believe Quintilian, literary criticism, dialectic, music, geometry, astronomy, politics, and ethics were carefully taught. The method of work was first learning to declaim model selections;

then participating in debate; and then, after attendance upon lectures, writing orations according to certain types. Many of the subjects taken for declamation, debate, and oration were on subtle points of Roman law which developed ability in making fine distinctions. But in the imperial period they were usually set in highly imaginary conditions, taken from mythology or history, and very remote from the actual life of the day.

Higher Education.—At first a Roman desirous of a more liberal education went to one of the Greek universities, and that practice never entirely died out. But libraries grew rapidly in Rome in the Augustan era; and when Vespasian about A.D. 75 established a great library in the Temple of Peace, the foundation of a university was laid. The history of the University of Alexandria was repeated. Professorships in the liberal arts were established in connection with the library by successive emperors and finally Hadrian, about 125 A.D., organized it into the Atheneum. Schools of law, medicine, architecture, and mechanics were developed gradually—the old method of study in those subjects by apprenticeship to an eminent practitioner being superseded, as with us, by formal work in the schools. Little work was done in philosophical speculation or in scientific research, both of which were foreign to the Roman temperament. This, moreover, was the only Roman university, for Marseilles, where was situated the only other university in the West, remained to the end a Greek city.

Public Support of Schools.—It must be remembered that these various classes of schools grew up wholly under private auspices without either government supervision or government support. So extensively did these schools spread that by the time of Marcus Aurelius there

was practically no provincial town without its grammar school nor provincial capital without its rhetorical school. Vespasian inaugurated the practice of paying the salaries of selected teachers of grammar and rhetoric and his successors extended it. Finally Antoninus Pius, c. 150, awarded to some teachers of grammar, rhetoric, and philosophy many of the privileges of the senatorial class, especially exemptions from taxation and military service. These became the foundation of the privileges of the clergy, when the empire became Christian under Constantine, c. A.D. 326. In 376 Gratian established a fixed schedule of salaries for teachers thruout the empire. In 361 Julian had asserted the right of the emperor to pass upon all appointments made by the municipal governments. In 425 the establishment of schools was made an exclusive privilege of the state. But just when the imperial government might have developed a national system of education, the invasions of the barbarians put an end to the schools and the empire as well.

Decay of Roman Society.—The overthrow of the empire was not a difficult undertaking, for the government had become a mere shell. From the beginning of the third century it was a pure despotism. All pretense of maintaining the old practices of the republic was given up. Oriental forms of servility, including prostration before the emperor, became prevalent. The imperial court was large, luxurious, immoral, and servile. All power was centered in the emperor and in the bureaucracy, which had become exceedingly numerous and costly. The senatorial class, entrance to which was obtained by favoritism or bribery, had immense privileges and few corresponding obligations. There was no outlet for the abilities of senators in the state, and they shunned the army filled with barbarians. They led a

life of luxurious ease—at best one of cultured leisure, at worst one of debauchery—wholly without interest either in the affairs of the state or of their wretched fellow men about them. The other free citizens, the *curiales*, had to bear the burdens of the army and the government. As the result of plague, infanticide, and immorality, there was a constantly diminishing population and a corresponding decrease in ability to support the defenses against the barbarians. The Roman Empire fell because of lack of men and money. The slave class, enormously increased by the successive wars, was still further augmented from the ranks of the freemen, many of whom voluntarily entered slavery to escape the obligations of Roman citizenship.

Decline of Education.—As stated before, whenever there is a change in social ideals and social life, there is sure to be a corresponding change in education. In this period of decline education became more and more a privilege of the senatorial class. It no longer aimed to prepare for the practical duties of a man of affairs, and became more and more a culture education to enable a man to shine in society. A desire for perfection of form, without reference to the real meaning and content of things, animated the school. With such a view of life and such an aim of education the period was naturally one of sterility. After Marcus Aurelius, d. A.D. 180, no writer, artist, or philosopher of the first rank appeared, and but a negligible number of second rank. No pagan authors of this period had any influence on later times, save a few writers on technical subjects, like the grammarians Donatus, c. A.D. 400, and Priscian, c. A.D. 500, whose grammars were used during the Middle Ages. Hence the schools of grammar devoted themselves to a study of the old classics, especially Virgil

and Horace; no longer, however, for inspiration and literary appreciation, but solely for style, diction, and apt quotation. Similarly, as oratory was no longer to be used in the practical affairs of life, content was of no importance and form became everything. Hence to acquire a big vocabulary, a florid style, a bombastic speech was the aim of students in the schools of rhetoric. As orations were no longer delivered in the senate or forum, the orator or rhetorician took refuge in the home or theater, where he gave exhibitions to which the cultured flocked as they attend musicales today. Philosophy was no longer taught in any of the schools of the West, and law in but few of them. The schools of grammar and rhetoric flourished to the end. Their teachers remained honored and well paid, but their debased culture without the liberalizing virtues of the Greek education or the practical virtues of the Roman did not have any influence in a period of stress and storm.

Roman Writers on Education.—As we have seen, the Roman, unlike the Greek, did not speculate on the aim of life or the meaning of education. To him education meant merely a practical preparation for practical life; hence, as we should expect, any treatise on education by a Roman is largely an exposition of current practice. Our information concerning Roman education is obtained chiefly from Cicero's "De Oratore," Tacitus' "De Oratoribus," Suetonius' "De Grammaticis" and "De Rhetoricis," and particularly Quintilian's "De Institutione Oratoria" ("Institutes of Oratory"). Of these, however, only Quintilian gives an exposition of the entire field of education. Such problems as the relative advantages of tutorial and school training, discipline, interest, memory training, adaptation to temperament, and qualifications of the teacher are considered in the

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twelve books of his great work. But it is chiefly devoted to a consideration of literary values and methods of teaching subjects, from the alphabet to oratory, his suggestions in method conforming in many instances to the most approved of the present day. Tho a Spaniard by birth, for twenty years he was Rome's most distinguished teacher of rhetoric, and he wrote his treatise only after he had retired from active service, A.D. 96. He was highly esteemed by his contemporaries and was the first teacher of rhetoric to be subsidized by Vespasian. His treatise had a great influence upon the schools until the fall of the empire, and it was of much service to the humanists after its discovery in the early Renaissance.

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QUESTIONS, COMPARISONS, AND TOPICS FOR FURTHER STUDY

1. What reasons are there why biography plays so different a part in the education of the Roman and of the American boy?

2. In what period of our national life did the education

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of the American boy resemble that of the early Romans? What influences have brought about the change?

3. In what period of our national life did public speech play as important a part as with the Romans of the republican period? Why does it not play so important a part today?

4. The Roman began the study of Greek in early childhood. In the American public school the pupil begins foreign languages in the high schools. Which practice is based upon sound principles of education?

5. The Roman emphasized secondary education; we emphasize elementary education. Why?

6. In the aim and organization of education does our system resemble the Greek or the Roman?

7. Compare the "Wanderjahr" of the Germans with the Roman practice of sending boys abroad to Greek schools.

8. Compare the imitation of Greek culture by the Romans with that of Western culture by the Japanese in aim, content, and method.

9. The average Roman completed his work in the rhetorical school at about nineteen or twenty years of age. Why do American students require two or three years more?

10. Compare the curriculum of a rhetorical school as outlined by Quintilian with that of an American college.

11. Is there any evidence that the practice of the Roman emperors in subsidizing rhetoricians was for the purpose of controlling their freedom of speech?

12. The statement is often made that America needs a "leisure" class. The senatorial class formed the Roman leisure class. Do social conditions today justify the belief that such a class would take a different attitude towards social living?

13. Compare the attitude towards foreigners of the Roman of the imperial period with that of Americans today.

14. Which of the great culture nations of today have not based their jurisprudence upon Roman law? Why?

CHAPTER VI

EARLY CHRISTIAN EDUCATION

Outline.—Christianity sought the moral regeneration of the individual and thereby of society, hence at first it gave its adherents a wholly moral and religious education in the *catechumenal* school.

Later, when it spread among the upper classes, it gave a higher education in the *catechetical* schools, which became seminaries for the training of priests. Attached to the bishop's church there also developed *cathedral* schools, which became one of the chief instruments of the Church in which to train leaders of the faithful.

How the Way Was Prepared for the Spread of Christianity.—After the establishment of the empire, Rome imposed upon the civilized world the *pax Romana*, the Roman peace. This permitted missionary work upon the part of the early Christians which would otherwise have been impossible. The necessity of governing all the different nations and peoples resulted in the development of the *Jus Gentium* (Law of Nations), which consisted of those principles of law common to all nations. This prepared the minds of men for the idea of a moral law common to all men and binding upon all, bond or free, rich or poor, learned or ignorant. The filling of the Roman armies with men of all nations, the gradual extension of Roman citizenship to men of all nations, the knowledge that they were controlled by a common law resulted in the gradual development in

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the minds of the best, especially among the Stoic philosophers, of the idea of a *genus humanum*, a human kind, i. e., that despite racial differences man is essentially the same. This prepared the way for the Christian teaching that all men are the children of one Father, hence are brethren, and that among His children. He makes no allowance for distinctions of birth, wealth, or learning. Moreover, Christianity appeared at a time when the world was weary of itself, when men were convinced of sin, when there was a vain striving to discover a moral support not afforded by the pagan religions or even the pagan philosophies. A great vitalizing force was needed not only in the West, but even more in the East, where life and education as typified by Israel had become incrustated with a narrow and dogmatic formalism. This vitalizing force appeared in the person of Jesus Christ, a product of the Jewish family life, of the synagogue, and of the rabbinical school. But the founder of Christianity reacted forcibly against institutional suppression of the individual.

The Christian View of the Relation of the Individual to Society.—The Greco-Romans never distinguished between the man and the citizen. The only virtues they valued were civic, were in some form of service to the state. The idea of personality, of a human soul valuable in itself and worthy of development for itself, with such attendant individual virtues as charity, sympathy, or self-sacrifice for one's fellow men, found little place in their thought. The very appeal that Christianity made to what was common in all men implied that national lines of cleavage were artificial. The denial of the existence of national gods would inevitably bring Christianity into conflict with the state. The belief in the existence of a future state and the belief that earthly exist-

ence was but a preparation for it, the belief in the early return of the Master and the passing away of the world suggested the contemning of earthly interests and pleasures in consideration of a state of eternal salvation. Hence the "otherworldly" ideal of the early Christians; hence their adherence to the institution which embodied it after their religion became organized, viz., the Church; hence the withdrawal of many of the best from the consideration of mundane affairs. This was the very reverse of the pagan viewpoint. The pagan lived for this world, found his happiness in it, and expected to live in no other. The problem of the reconciliation of individual freedom with social stability did not assume a great importance to one whose gaze was fixed upon another sphere and another life.

Christianity a Moral Discipline.—Christianity sought the moral regeneration of the individual and thereby of society. Personal purity was the first essential for entrance to the fold. To appreciate the magnitude of the task of the early Church, it is necessary to remember the debased condition of Roman society. Infanticide and child exposure, practiced by all classes, were to the Christian simple murder. The ease of vice, the immoral public ceremonials under the guise of religion, the bloody gladiatorial displays were dreadful abominations. Even before the tremendous task of overcoming these evils had been accomplished, another great work confronted the Church, viz., the conversion of the barbarians in order to save the faith and civilization itself. It may well be asked, "How much energy remained to be devoted to education and culture?" Moreover, to the Christian there was no reason for saving the pagan culture. Its literature was full of impurities, its art associated with its immoral religion, its philosophy de-

voted to destroying the faith. As the school was the stronghold of the pagan culture, it gradually became regarded as the enemy of the Church and its work anathema to the true believer. Hence the development of an education in which what the pagan approved—viz., bodily training, literature, art, science and philosophy—were omitted, and what the pagan neglected, moral training and religious instruction, were emphasized.

The Catechumenal School.—But this point of view did not prevail at once.

The teaching that this life is but a preparation for another and eternal life in which rewards and punishments will be meted out according to conduct on earth, brought hope and inspiration to the millions of slaves and unfortunates who were neglected and subjected under the pagan civilization. It was among these that Christianity won its adherents during the first centuries. They had no education, did not feel the need of it, and in fact regarded with unfavorable eyes what chiefly distinguished their masters and persecutors from themselves—the pagan culture. But some instruction was necessary for entrance to Church membership for the converts from Judaism and paganism, as well as for the children of believers. Hence at stated intervals during the week these met in some part of the church for religious instruction, moral training, and the learning of psalmody. The teachers were at first the ablest members of the local church, and the office became a clerical one only after considerable time had elapsed. At first the period of instruction necessary for baptism was two years, but as the children of believers became numerous it was extended to four. These catechumenal schools became universal among the Christians, and lasted long after Christianity had vanquished paganism.

The Catechetical School.—For more than two centuries the catechumenal schools supplied most of the educational needs of the Christians. During that time, however, Christianity had begun to spread among the serious-minded of the well-to-do pagans, who wished a higher education for their sons. The latter had been sent to the pagan grammar and even the pagan rhetorical schools, their parents relying upon rigid home training to overcome any evil that might result from the association with pagan influences. But towards the end of the second century and thereafter Christianity made converts among the teaching class, among grammarians, rhetoricians, and even philosophers. These men naturally brought with them their learning and their love of learning. Moreover, as long as Christianity remained the religion of the poor and ignorant, it was treated by the learned merely with contempt. When it began, however, to make headway in their own ranks its doctrines as well as its practices began to be attacked. To defend these doctrines an education different from that of the catechumenal schools was necessary. Hence some of the converted teachers opened schools for the Christian youth. At first these were wholly private and unconnected with the Church. But in 179 Pantænus, a converted Stoic philosopher, became head of the school for catechumens at Alexandria. He was one of the "Apologists," as those who attempted to reconcile Christianity with Greek philosophy were called. Under him, and particularly under his eminent successors, Clement (c. 160-215) and Origen (c. 185-254), this school, which was called *catechetical*, meaning "to teach orally," i. e., to lecture, developed into an institution where the entire round of the Greco-Roman learning was taught. Grammar, literature, rhetoric, and philosophy were studied as

thoroly as in the pagan schools, tho always as the hand-maidens of the Scriptures; and the students took advantage of the opportunities for study offered by the University of Alexandria. At first scholars from all classes were admitted to the schools; but gradually they developed into a kind of seminary for the training of the clergy. Similar institutions, tho not so celebrated, were established at Cæsarea, Antioch, Edessa, and Nisibis.

The Church Fathers.—By the beginning of the fourth century the era of persecution was closed. Christianity was legally tolerated A.D. 313, and soon afterwards became the state religion. The Church had conquered the world, but in the conquest its adherents had lost much of the purity and simplicity of the early Christians. It now paid to be a Christian, and numerous adherents of the faith were but nominally so. During the first three centuries the attitude of the Greek Church Fathers had been uniformly friendly to the study of the pagan culture. Clement and Origen were enthusiastic in its advocacy, maintaining that the pagan culture contributed to an understanding of the Scriptures and that it was justifiable and wise “to spoil the Egyptians.” Even when this enthusiasm waned and a more critical attitude was adopted towards the pagan learning, such eminent Fathers as Basil (331-379) and Gregory of Nazianzus (c. 325-390) protested against its exclusion from the Christian schools. The attitude of the Latin Church Fathers had always been more unfriendly. It was the moral grandeur of Christianity that especially appealed to the Romans, and the Latin Fathers felt that the great mission of the Church was ethical. Moreover, the application of Greek philosophy to Christian doctrine had resulted in numerous heresies in the East. The native conservatism of the Roman

would incline him to the traditional element in the faith, and his practical insight would suggest most forcibly the danger to morals in the study of the classical literature. Hence, despite the fact that they had all been teachers and were steeped in the pagan culture, Tertullian (c. 150-230), Jerome (331-423), and Augustine (354-430) eventually discountenanced such study among the faithful. It was probably due to Augustine's influence that the Council of Carthage (401) forbade the clergy to read any of the pagan literature. The Church thereby broke with humanism. This decree was contemporaneous with the invasion of the barbarians and the rapid disappearance of the pagan schools.

Cathedral Schools.—Christianity spread primarily in the cities; when the Church had grown in numbers and strength and was organized into dioceses, the chief cities became the sees or seats of bishops and also the sites of the cathedral churches. Schools similar to the catechetical schools gradually became a necessity in each diocese to supply clergy, and promotions in the clerical ranks became dependent upon attendance in these schools. Naturally these schools fell under the supervision of the bishops and were called at first *bishops' schools* or *episcopal schools*; but gradually in the West this name was superseded by the title *cathedral schools*, from their association with the cathedral church. After the disappearance of the pagan schools, the cathedral schools and the monastic schools divided between them the field of education during the entire medieval period. As their work was similar, a knowledge of the work of the cathedral schools can be obtained by the study of the monastic schools, to which we shall now turn.

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QUESTIONS, COMPARISONS, AND TOPICS FOR FURTHER STUDY

1. Is Christianity as successful today in its appeal to the proletariat as it was in the first century?

2. What caused the emphasis upon the practice of the Christian virtues which characterized the faithful in the first and second centuries to give way to the emphasis upon belief which characterized them in the third and fourth centuries?

3. What would be the natural effect upon education of the difference between the pagan and the Christian attitude towards death?

4. Why did the incursion of the German barbarians strengthen the hostile attitude of the Church toward pagan culture and education?

5. Compare the work undertaken in the catechetical school with that of the Sunday school today.

6. Why would the ideals of Christianity more naturally lead to the establishment of hospitals, foundling and orphan asylums, and similar philanthropic institutions than those of paganism?

7. Compare the appeal made to the poorer classes of the Roman world by Christianity with that made to them today by Socialism.

8. Compare the fleeing of the Christians from the world before Constantine's conversion and after it.

PART II

EDUCATION IN THE MIDDLE AGES

Characteristics: The submergence of the individual in institutions. The “otherworldly” aim of life, hence education essentially religious and under the control of the Church.

CHAPTER VII

EDUCATION IN THE MIDDLE AGES

Outline.—Monasticism developed as a protest against the prevailing worldliness, and was organized in the West by St. Benedict A.D. 529. He prescribed two hours a day of reading for the monks; to enable the novices to secure which the monastic school was established, in which the curriculum developed into the *seven liberal arts*.

Because of the troubled conditions of the seventh and eighth centuries learning greatly decayed. Charlemagne did much to restore it by establishing the Palace School, with Alcuin as headmaster, and by improving the monastic and cathedral schools.

In addition to the clergy, the other important class of the Middle Ages was the knights, who received an education in "the rudiments of love, of war, and of religion." The future knight was apprenticed to a lady as a page from seven to fourteen, and to a lord as a squire from fourteen to twenty-one, when he might be knighted.

The Saracens in the East absorbed Greek learning and brought it with them to Spain. There they developed a splendid culture in literature, art, science, and philosophy. Christians were admitted to their schools and brought back to Christian Europe much of the Saracen learning. Avicenna in medicine and Averroës in philosophy were studied in the medieval universities.

A number of causes combined to produce an educational revival in the twelfth century, which had scholasticism as its chief intellectual product. This was a method of philosophizing which aimed to reconcile faith and reason. It re-

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sulted in the organization of the limited knowledge of the times into complete systems on the basis of Aristotelian deduction.

The medieval university arose as a specialized school of some one of the great professional studies—determined in each case by local conditions. The students, who came from many different countries, were divided into *nations*; the teachers were divided into the four *faculties* of arts, law, medicine, and theology. The nations and faculties elected representatives to the *university council*, which was the governing body, and which elected its executive officer, the *rector*.

The content of study in all the faculties was taken from textbooks which were read and explained by the masters. In addition the students received a training in debate by means of disputations. The courses were narrow, but the methods developed acute reasoners.

A. MONASTIC EDUCATION

Nature and Growth of Monasticism.—As has already been stated, during the first two centuries the Christians remained a distinct community within society, participating but little in its political and social activities. But as Christianity grew in strength and numbers its adherents entered into the secular life of the time and were distinguished from the pagans by their religious beliefs rather than by their attitude towards life. Hence many who believed that the spiritual perfection necessary to eternal salvation was only to be secured by remaining distinct from worldly pleasures and activities fled society and took refuge in the wilderness of the desert or the forest, where they found fugitives from the persecutions. World-renunciation is the first essential element in monasticism. The method of securing spiritual perfection thru bodily mortification was the

second essential element. The pagan exalted and beautified the body while neglecting the soul. The Christian exalted and beautified the soul by neglecting and even debasing the body. The early ascetics fled into the deserts of Egypt, where they lived as hermits or anchorites. But the social instinct prevailed in the course of time, and by c. 330 we find that Pachomius had organized a monastery on the island of Tebernae in the Nile, where the monks lived apart in separate cells for contemplation, but came together for meals, prayers, and religious services. St. Basil introduced this cenobitic system into Greece c. 350, and Athanasius and Jerome transferred it to the West shortly afterward. For nearly two centuries each monastery in the West lived under its own regulations. But in 529 St. Benedict, a Roman patrician who fled the corruption of the city, founded the monastery of Monte Cassino in southern Italy. He drew up a rule or code, consisting of seventy-three articles, which dealt in detail with the organization and administration of the monastery and the daily life of the monks. The "Rule of Benedict" was gradually adopted by nearly all monasteries of the West, and every succeeding order that was established based its code upon it.

Monastic Ideals.—The ideals of monasticism, which are best summed up in its three vows of poverty, chastity, and obedience, would seem to have slight connection with education. Poverty meant the renunciation of material interests; chastity, of family relations; and obedience, of political organization. The monks neglected the three great aspects of social life, viz., industrial organization, the family, and the state. The problem of reconciling individual liberty with social security did not exist where the individual voluntarily surrendered his liberty. But tho these ideals would seem to make the

institution of monasticism anti-social, they had a very great influence in the civilizing of the barbarians.

The Rule of St. Benedict.—The social contributions of monasticism are largely the result of St. Benedict's code, especially of the forty-eighth article, which prescribed at least seven hours daily of manual labor and two of reading. The provision regarding manual labor rescued the latter from the disrepute into which slavery had brought it and furnished a densely ignorant population with leaders and experts in the manual arts. The monks became model farmers, draining swamps, introducing new crops, reducing forests. They became, moreover, model craftsmen in wood, iron, leather, silver, and gold. But the provision requiring at least two hours of reading had social and educational effects in which we are more directly interested. It made the monastery:

1. The publishing house of the Middle Ages. If the monks were to read, manuscripts had to be reproduced and multiplied. Each monastery had a *scriptorium*, in which not only the sacred writings, but even some of the Latin classics were copied.

2. The library of the Middle Ages. In the course of time practically every monastery had a library in which the copied manuscripts were placed. And tho it seldom contained more than half a thousand volumes, and those chiefly of sacred literature, there grew up the practice of exchange between libraries and even of circulating privileges for outsiders.

3. The center of literary activity of the Middle Ages. The monks not only copied manuscripts, they wrote volumes. The monastic chronicles are our chief source of knowledge of the institutions and customs of the time; and, tho sometimes unreliable in fact because of the monks' desire to enhance the position of the Church, they

are more accurate than the court chronicles. Moreover, the monks wrote lives of the saints, sermons, moral tales, and commentaries on the Scriptures and Church Fathers.

4. The school of the Middle Ages. If the youths who joined the orders were to read two hours per day in the Scriptures, the Church Fathers and the missal, and participate in the copying of the manuscripts, they had to be taught at least to read and to write. Hence, tho nothing appears in the seventy-three rules about either schools or teaching, the monastic schools arose as the result of the prescription of reading.

The Monastic School.—At first the education of the monastery was devoted wholly to the *oblati* (those offered), i. e., the novices, and was almost entirely religious. Reading and writing were taught as necessary to the study of the sacred books, singing for the religious services, and reckoning to calculate the church festivals. But in time one or other of the compendia or encyclopedias which contained in condensed form the elements of the classical culture was used for the higher education which began to develop. Even before the disappearance of the pagan schools Martianus Capella wrote, c. A.D. 420, a treatise called “The Marriage of Philology and Mercury,” which contains in a dry, allegorical form the teaching then given in the seven liberal arts. This was one of the favorite textbooks of the Middle Ages. Boëthius, the “Last of the Romans” (480-524), wrote brief treatises on logic, ethics, arithmetic, geometry and music, which were extensively used as textbooks. His “Consolations of Philosophy,” the most widely read secular work of the Middle Ages, gave to the first half of that period practically all it knew of the ancient philosophers and moralists. Cassiodorus (490-585) in his

work, "On the Liberal Arts and Sciences," introduced the term, "the seven liberal arts." Isidore of Seville (570-636), the bishop of that city, in his "Origines" or "Etymologiae," which was an encyclopedia of all the knowledge of the day, used the terms *trivium* and *quadrivium*. Isidore became a chief authority in the monastic schools, and after his time the seven liberal arts became the traditional curriculum.

The Trivium and Quadrivium.—Grammar, rhetoric, and dialectic (logic) formed the arts part of the curriculum; arithmetic, geometry, astronomy and music, the science part. The content of each subject is not well indicated by the name. Grammar included literature, and in the stronger monasteries not only Virgil but other pagan authors were studied. Arithmetic, on the other hand, consisted of nothing but calculating, until the introduction of the so-called "Arabic" notation, when its content was much increased. In fact, with each of the seven studies there was a growth during the Middle Ages from the very rudiments of the subject to a broad field. Geometry came to include not only the complete system of Euclid, but whatever was known of geography and surveying. Astronomy, at first devoted to the arranging of feasts and fast days, came to include a considerable knowledge of both astronomy and physics. Rhetoric, at first needed merely for drawing up official letters, gradually covered a good deal of history and some law. The importance attached to a subject depended upon the needs of the period. During the first half of the Middle Ages, when a knowledge of Latin was the greatest essential, grammar and rhetoric were most emphasized. When the Saracen learning began to spread from Spain, arithmetic, geometry and astronomy received much attention. After the eleventh cen-

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THE MEDIEVAL SYSTEM OF EDUCATION SUMMARIZED

From Cubberley's "History of Education Syllabus." Macmillan Co.

tury, during the long scholastic controversy between nominalism and realism, dialectic was the chief subject. It must be remembered that in the ordinary monasteries only the rudiments of these subjects were given in the

early Middle Ages, and that the broader knowledge was confined to a few of the great monasteries, such as Cluny and Tours in France, St. Gall in Switzerland, Fulda and Reichenau in Germany, York and Canterbury in England, Monte Cassino in Italy. The study of the Greek language and the Greek literature rapidly disappeared on the Continent, but was continued with enthusiasm in Ireland, the "university of western Europe," as late as the tenth century. In fact it was from Ireland that scholars brought the love of learning which distinguished the monasteries of northern England in the seventh and eighth centuries and made Wearmouth and Yarrow, where the Venerable Bede wrote his Chronicle, c. 725, two of the great centers of learning for Europe.

Administration of the Monastic Schools.—No one could be admitted as a regular member of the order until he was eighteen; therefore, as boys of ten were received into the monastery, the course often lasted seven or eight years, altho the required novitiate was only two years. In the later medieval period boys who did not intend to enter the order were also admitted. These were called *externi*, in distinction to the *oblato* or *interni*; it is doubtful whether they received such detailed instruction as the *oblato*. The chief method of teaching used was that of question and answer; but, because of the scarcity of books, the teachers had much recourse to dictation and the pupils to memorizing. The discipline was severe, the teachers making frequent use of the rod. It should be remembered that no instruction in the vernacular was given in any of these schools, and that they were secondary schools rather than elementary. The only purely elementary schools were the song schools attached to the cathedrals, in which reading and writing

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were taught, as well as singing. Another fact to be remembered is that many of the convents or nunneries had schools in which girls were taught reading, writing, reckoning, singing, and sewing and embroidery for the production of the altar cloths and other religious materials.

Charlemagne and the Revival of Learning.—The development of education during the Middle Ages was not a steady growth from the fifth to the fifteenth century. The status of learning depended to a great extent upon political conditions. It was far lower in the eighth century than in the ninth and higher in the ninth than in the tenth. This was chiefly due to the great impulse given to education by Charlemagne, who reigned 771-814. Charlemagne had conquered many of the pagan German peoples to the east, and he was anxious to extend to them as much of the Roman culture as remained. Moreover, he felt that the different peoples of his dominions could never be brought into a real unity without a common language, culture and ideals. To attain this he adopted three measures which proved most successful.

The Palace School.—First, he established the Palace School. He called together scholars of repute from all over Europe to teach in the school, with Alcuin of York, the greatest scholar of the day, as master. The members of the royal family, including Charlemagne himself, and the sons of the nobility were the students. By means of this school Charlemagne hoped to secure intelligent administrators both in church and state. Moreover it would serve as a model from which teachers could be sent to found similar schools thruout the empire. To maintain a constant supervision of the school, Charlemagne had it accompany him on his various circuits.

The Capitularies.—Secondly, Charlemagne made the greatest use of the instruments at hand, viz., the cathedral and monastic schools. Beginning with the capitulary or decree of 787, he issued a series of decrees directed, for the cathedral schools, to the bishops and, for the monastic schools, to the abbots, ordering them to see that every cathedral and monastery had its school, prescribing the studies that should be taught, and commanding an earnest study of religious books by the regular and secular clergy.

The Missi Dominici.—Thirdly, Charlemagne as a great statesman knew that the decrees, to be of any value, would have to be enforced. Hence he empowered his official messengers, the *missi dominici*, without previous notice to enter any monastery and observe whether his orders were being carried out. An unfavorable report would bring upon the offending monastery the wrath of the emperor and probably result in the removal of its head. These measures necessarily caused an immediate and decided improvement in the number and character of the schools. Nor did this educational activity cease with the death of Charlemagne. In 817 his successor ordered the establishment of schools for *externi* as well as for *obliti*, and it was only after the troubled times following the division of the empire and the invasions of the Northmen that the cause of education on the Continent received a setback, from which it did not recover until the beginning of the twelfth century.

In the meantime Alfred of England, who reigned 871-901, followed the example of Charlemagne in establishing a palace school and calling learned scholars to his aid. In order to provide material for study and reflection and to spread learning as widely as possible, he translated into the vernacular a number of works,

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the chief among which was Boëthius' "Consolations of Philosophy." Even the ravages of the Danes could not destroy all the good he accomplished.

Alcuin (735-804).—Alcuin's service to the cause of education was not limited to his work as master of Charlemagne's Palace School. In 794 he retired from that position to become Abbot of Tours, the richest monastery of France, which he made a center of learning. Alcuin had not a creative mind, and his treatises on grammar, rhetoric, dialectic and arithmetic, written in the catechetical form, mark no advance in either thought or matter. In fact he was essentially a conservative and did not approve of the advanced views of the Irish scholars. But he sent scores of scholars thruout Europe to teach, and he rendered an equally great service in editing the manuscripts of early writings which in the course of repeated transcription had become filled with error as well as with barbarous Latin.

Rabanus Maurus (776-856).—The most noted pupil of Alcuin was Rabanus Maurus, who made the monastery of Fulda in Northern Germany as important a center of learning as Tours. He was a man of greater initiative than Alcuin and showed greater originality in his treatment of the same subjects. Moreover, he considered dialectic, not grammar, as the chief instrument of learning and power. His greatest work was "On the Education of the Clergy," which contains his views on the seven liberal arts.

Johannes Scotus Erigena (c. 810-875).—But the most virile intellectual work of the period was done by the Irish scholars. Their influence was greatly extended on the continent when Johannes Scotus Erigena was called (c. 850) to be master of the Palace School. This remarkable man brought with him a thoro knowledge of

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Greek and a love of the pagan authors. Moreover he had a more vigorous mind than any of his predecessors or contemporaries, emphasized the study of dialectic, and stimulated speculation upon questions of theology. He was really the forerunner of scholasticism.

B. CHIVALRIC EDUCATION

Nature of Chivalry.—The German warrior was characterized by a spirit of personal independence and voluntary loyalty to a chief. When the dominions of the Roman empire were conquered, the land was divided among these warriors, and military service on horseback gradually became limited to those holding land. The ideals of obedience and service developed by these social conditions and refined by Christianity remained the ideals of the knight until he disappeared with the passing of the Middle Ages. These ideals had the greatest influence in modifying the lawless selfishness of a time when might made right. The good social usage and social form developed in the maintenance of these ideals became known as chivalry, and, like every other institution, it slowly changed its character with time. While religion, honor, and gallantry remained always the springs of action for the knight, during the period before the Crusades, when chivalry became definitely organized, the religious aspect was the most prominent. This was the period of the *Chanson de Roland*, the Arthurian legends, the search for the Holy Grail. After the Crusades the secular element became more prominent, devotion to one's lady superseding devotion to the Church in importance. This was the period of the troubadours in France and of the minnesingers in Germany. In the course of time the customs and rules of chivalry,

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which required a definite education for their acquisition, became fixed and formal; and this led to the artificialities and absurdities which accompanied its downfall.

Place of the Knight in Medieval Society.—Until about 1200 medieval society was divided into three great classes: serfs, clergy, and knights. The commercial and industrial towns had only begun to develop, the universities had not yet been established, and the Crusades had not yet discovered the importance of the yeomanry. From the standpoint of education the serfs may be neglected, as few received any education beyond that in religion given by the parish priests. The education of the clergy has been described, and whatever education the yeomen received was obtained either as *externi* in the monasteries or in the schools attached to the churches. But the knight received a prolonged training which, tho without much intellectual content, had profound influences upon the individual and society. In the earliest medieval period it was customary for the inferior nobility to send their sons and daughters as hostages to their overlords. Moreover, wardship by an overlord, i. e., the legal custody of orphan children, brought a considerable number of such children to the lord's castle. It was necessary to provide proper training for these boys and girls, and for others, not wards, who were sent to the court by parents with a view to their making suitable marriages.

The Education of the Knight.—Until the age of seven the sons of the gentry and nobility remained at home, being educated in morals and religion. At seven they went to the overlord's castle and began the long process of training which was to end only when they were clothed with the armor of knighthood. From seven to fourteen a boy was practically apprenticed as a page

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to a lady, from whom he learned good manners, reading, writing, singing, and dancing, and sometimes also to write verse, to play the harp, and to play chess. His chief function within doors was to perform the many personal duties that attached to his position as page. Outdoors he was taught to swim, ride, box, wrestle, and to joust at a dummy man called the "quintain." At fourteen the page became a squire, and his chief service was now with his knight or lord. He still waited upon his lady, with whom he hunted, sang, and played chess and the harp, but his pleasures consisted chiefly in hunting and hawking with his lord. His duties were most numerous, for he waited upon his lord's table, made his bed, groomed his horse, kept his armor perfect, attended him in the tournament or in actual warfare, and incidentally learned all the arts of war, especially how to fight with sword, spear, and battle-axe. At twenty-one he was knighted in a most elaborate ceremony, tho some individuals, because of lack of property, remained squires all their lives. The ceremony itself was preceded by weeks of religious preparation and by a night's solitary vigil in the church. In the morning, after partaking of the sacrament, his sword was blessed by the priest or bishop; he took the oath "to defend the church, to attack the wicked, to respect the priesthood, to protect women and the poor, to preserve the country in tranquillity, and to shed his blood in behalf of his brethren"; and he was then knighted by his lord. Sometimes a squire was knighted on the field of battle for some act considered particularly commendable.

Education of the Girl in the Castle.—While the young man was receiving the education described above, his sister was receiving a training similar in practically all of its features except the physical and military. In ad-

dition, a knowledge of household duties and of sewing, weaving, and embroidery was given. It was probably a broader education than that given in the convent; at least it included social features usually neglected there.

Effects of Chivalric Education.—The training in “the rudiments of love, of war, and of religion” had a most beneficial influence in softening and refining the habits and customs of a harsh age. Tho faults and even vices still characterized the average knight, he had a higher regard for womanhood, for the sacredness of an oath, for courtesy to his fellow men than he could possibly have had except for the training he received in the castle in the ideals of chivalry. Moreover, tho this was sometimes an education merely of worldly refinement, it was a foil to the “otherworldliness” of the monk and nun. It is to chivalry also that we owe the beginning of the vernacular literatures, in the tales, ballads and lyrics that were sung during the long winter evenings in the castle. Finally the ideals of obedience and service upon which chivalry was based had a splendid effect in modifying the extreme individualism of the German. For this was as necessary as a modification of the excessive state control of the ancient world, to secure a wise solution of the problem of reconciling individual liberty with social stability.

C. SARACEN EDUCATION

The Arabs in Contact with Greek Culture.—We have seen that the greatest of the catechetical schools were developed in the East at Alexandria, Antioch, Ephesus, and other places, and that for more than a century after their establishment they showed a liberal attitude towards the Hellenic culture. By the fifth century, how-

ever, the Eastern Church had become characterized by a narrow orthodoxy which caused the expulsion of all suspected of the various heresies that had resulted from the attempt to amalgamate Greek philosophy with Christianity. The most important of these expulsions, educationally, was that made by the Council of Ephesus, A.D. 431, when it proscribed the Hellenized theology of Nestorius, Patriarch of Constantinople. The Nestorians fled to the cities of Syria, especially to Nisibis, Antioch, and Edessa, beyond the control of the Eastern Church. There they developed splendid schools where the study of Greek science and philosophy was carried on, not only by means of translations into Syriac, but from original Greek treatises. Hence when, after conquering the ignorant and superstitious tribes of Arabia, Mohammedanism moved westward into Syria (635), it came into contact with a people of very different intellectual caliber, for whom Mohammedanism had to be rationalized before it could be accepted. By the end of the next century a great educational movement had commenced thru the influence of the Nestorians, having for its object the translation into Arabic of the works of the Greek scientists, philosophers, and physicians. The movement continued to grow in vigor during the next two centuries, and the tenth century found Damascus, Bagdad, and other Saracen cities renowned for their learning. The Arabs were assimilators rather than creators and absorbed not only from Greek but from Hindu and other sources. Avicenna (980-1037) wrote treatises on mathematics, medicine and philosophy; and to his influence is due the encyclopedia arranged at Basra by the "Brothers of Sincerity." This encyclopedia is an exposition of the entire Arabian learning, and closes with an attempt at harmonizing faith and reason. But

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the orthodox Mohammedans were greatly opposed to the Greek learning and its influence on their religion; and finally, c. 1050, its adherents were driven out and found refuge among the liberal Moslems of Spain and western Africa.

Saracen Education in Spain.—A splendid culture resulted from the introduction of the Eastern learning into the West. In the twelfth century a well-organized system of education was developed thruout the Mohammedan dominions in Spain. In all towns and cities were established elementary or mosque schools, where were taught reading, writing, arithmetic, geography, grammar, and religion. In the large cities like Cordova, Granada, Seville, Toledo, and Salamanca universities were founded, where not only was the existing knowledge taught by Moorish and Jewish scholars, but brilliant applications of it were made in mathematics, science, and philosophy. The Moorish scholars introduced into arithmetic the Arabic notation which they had borrowed from the Hindus. They made remarkable advances in physics, physiology, medicine, surgery, and pharmacy. They taught geography from globes, and astronomy from observatories. They made inventions, such as the pendulum clock, and discoveries, such as nitric and sulphuric acids. They used the compass and gunpowder, raised cotton and cultivated the silkworm, and in navigation, commerce, and industries were far in advance of Christian Europe.

Influence of Averroës upon European Thought.—But it was not in these directions that their greatest influence was exerted upon western Europe, but in the domain of thought. It is hard to overemphasize the influence of Averroës (1126-1198) upon the thinkers of the later Middle Ages, Christian and Jewish. He was the greatest

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commentator Aristotle that appeared from the fall of Rome to the Renaissance. He freed the master's thought from the Neo-Platonism with which it had become overlaid and introduced a spirit of rationalism into Moslem theology which eventually proved his undoing. His commentaries on Aristotle were translated into Latin and became authoritative with the schoolmen, wielding a great influence upon such distinguished scholars as Albertus Magnus and Thomas Aquinas. Hence after fanatical orthodoxy among the Moors drove learning out of Spain at the end of the twelfth century, the philosophy of Averroës and the medicine of Avicenna continued to influence the thought of Christian scholars for centuries.

D. THE EDUCATIONAL INFLUENCE OF SCHOLASTICISM

Origin of Scholasticism.—The early Middle Ages, from A.D. 500-1000, formed an age of faith, in which men accepted their beliefs without question. Towards the end of the period a number of conditions arose which profoundly affected that attitude of mind. The attacks of the Norsemen ceased entirely and gave opportunity for the development of civil and intellectual life. The learning of the Saracens began to percolate into Christian Europe, challenging the Christian to defend the doctrines of his religion; and in the twelfth century many of the Crusaders returned from the East, influenced intellectually by what they saw and heard among Greeks and Arabs, and seeking a solution of the doubts that had arisen. Hence the necessity of showing the reasonableness of the Church doctrines and restating them in a more rational and systematic form. This, then, is the essence of scholasticism—the harmonizing of faith and

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reason. It soon resulted in a conflict between authority and reason, but its characteristic attitude was one of conciliation. Scholasticism in fact is not a system of philosophy so much as a method of philosophizing.

Nature of Scholasticism.—Whenever a new intellectual impulse arises among men it will naturally be directed to that aspect of human thought or activity in which men are at the time most interested. Hence the educational renaissance of the twelfth century, resulting, as it did, in the intellectual product called scholasticism and in the institution known as the medieval university, where scholasticism found lodgment, was naturally concerned with religion. Religion was what men were interested in. Religion imposed its language and thought upon every other activity of man, whether architecture, music, or literature. The Church, the institution in which religion was embodied, became chiefly interested in giving its great doctrines proper philosophical statements and reducing them all to a harmonized system. In performing this task there broke out among its intellectual leaders the great controversy over the nature of knowledge, the problem of universals, which divided the schoolmen for centuries into the two camps of the realists and the nominalists.

The Controversy Between Realists and Nominalists.—Anselm of Canterbury (1034-1109), often called the father of scholasticism, based the realist position on the Platonic doctrine that ideas constitute the only real existence. The concept, or general term, is the archetype in the divine mind upon which the phenomenal thing has been modeled. Roscellinus of Compiègne (1050-1106) based the nominalist position on an interpretation of Aristotle to the effect that ideas, concepts or universals are only names which can be applied to a class

of individual things and that reality consists in the individual concrete objects. The realists contended that as the human senses are deceptive, revealed truth alone is reliable and human experience and human reason may be trusted only so far as they support it. The nominalist position implied that truth can be reached only thru investigation by means of reason. Realism became the orthodox view of the Church, and Roscellinus was compelled to recant. His fate discouraged nominalism for two centuries, but his critical work was continued by his pupil, Abelard (1079-1142), the best known of the early schoolmen. Abelard's position, conceptualism, was a compromise between the other two. He held that a concept or universal or class term had no objective existence. Nevertheless it was not merely a name applicable to a number of individual objects, but the sum total of the qualities those objects have in common. Tho Abelard's philosophical position was a conciliatory one, his great influence as a teacher and his writings were distinctly critical of the orthodox position. Moreover, in his influential work "Sic et Non" he maintained that reason was antecedent to faith and the true fountain of much of Christian doctrine. Tho he was twice condemned, his influence continued, and when in the early thirteenth century, as the result of the Crusaders' conquest of Constantinople, Aristotle's "Ethics," "Physics," and "Metaphysics" were recovered to the West, the tendency started by Abelard received a great impulse. The Church itself adopted Aristotle and made him her chief bulwark of defense. Philosophy and theology became allies, and during the thirteenth century scholasticism reached its zenith in the organization of theological views into perfectly logical systems by a number of deep and subtle thinkers. The greatest of these was

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Thomas Aquinas (1225-1274), whose "Summa Theologiae" has remained the authoritative presentation of the beliefs of the Roman Catholic Church. It is not only that, however, but also the most complete exposition of the knowledge of the times, all organized into a logical system culminating in theology. The harmony in the scholastic world following the work of Aquinas was destroyed as the result of the revival of nominalism by William of Occam (1280-1347). He denied any rational basis to theological doctrines and asserted that they were entirely matters of faith. In other words, he asserted the existence of two types of truth, the results respectively of revelation and reason. The tendency after him became more and more to adopt the truth which was supported by reason, and that meant the passing of scholasticism.

The Method of Scholasticism.—The early schoolmen were usually associated with cathedral or monastic schools, which in some cases developed into universities as the result of the intellectual awakening involved in scholasticism.¹ The method of presenting subjects most generally used in the schools² was now superseded by the method of logical analysis. The entire subject or textbook was divided into appropriate parts, each of which was subdivided into heads, which in turn were divided into subheads down to the particular proposition. In the universities the analytical method was applied to the form of argumentation as well as to subject matter. First the problem was stated, then the arguments and authorities for the unorthodox solutions were given and refuted, then those for the orthodox solution were presented, and finally the several objections to it

¹See p. 99.

²See p. 81.

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were answered in the same systematic manner. The chief textbook for use in the schools was the "Sententiae" (Opinions) of Peter the Lombard (1100-1160), a pupil of Abelard who taught at Paris. In the latter part of the scholastic period the "Summa Theologiae" of Thomas Aquinas was equally popular.

Influence of Scholasticism.—The method of scholasticism produced minds as keen and subtle as are met in any period of history. The attention of these minds was directed towards abstract and metaphysical questions, not towards the world of man and nature; hence comparatively little actual progress was made in widening the boundaries of knowledge. But their analytical method showed that there were two sides to every question; and, with the revival of nominalism under Occam, the insistence upon experience as a source of truth paved the way for the Renaissance and the development of modern science. Moreover, scholasticism gave a great impetus to intellectual pursuits, and resulted in the maintenance of a large class of learned men at a time when the fighter was exalted. In fact it was only in its decay, when the schoolmen's discussions degenerated into endless and profitless quibbles over the use of terms, that scholasticism lost its educational value and significance.

E. THE MEDIEVAL UNIVERSITY

Rise of the Universities.—The thirteenth century was a period of remarkable progress in human history. The last of the pagan Teutons, the Northmen, had accepted Christianity and thereby given western Europe a period of comparative peace in which to develop. The Crusades destroyed the isolation of feudalism, stimulated the growth of cities and commerce, and greatly broadened

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the horizon of the western European. Contact with Saracen learning and the securing of copies of Aristotle's works gave a great impulse to intellectual pursuits. The numbers of students who attended the more prominent cathedral and monastic schools increased. In some of these schools distinguished teachers began to lecture on the new interests that had arisen, and attracted increased numbers of students. This in turn made a demand for additional teachers, and then the elements of a medieval university were present, viz., teachers and students. There were for a long time no buildings, libraries, or other appurtenances. In this way the University of Paris, the greatest of the medieval universities, was developed from the cathedral school of Notre Dame, chiefly as the result of the brilliant work in philosophy of Abelard and of his pupil, Peter the Lombard. Paris was not the first of the medieval universities, however. Already a vigorous school of medicine had arisen at Salerno, near Naples, a place noted for its salubrious climate, at which invalids sojourned to take advantage of the mineral springs that were found there. It is supposed to have received its chief impulse from the labors of a monk, Constantius Africanus, who had traveled extensively in the East and translated into Latin the best of the Greek and Arabic authorities on medicine. About the same time a great interest had arisen in the study of law in northern Italy. This was due to the struggles of the cities there to retain their privileges against the encroachments of the German emperors, privileges which depended upon charters, edicts, and grants running back to the time of the Roman emperors. There were several cities in which the new study was undertaken, but Bologna became preëminent as the result of the work of the great jurist Irnerius (c. 1067-

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1138). It is evident, therefore, that no specific dates can be assigned for the beginnings of the earliest universities. They had existed for years as professional schools for the study of some special subject before they received charters from popes or sovereigns. Salerno never received a charter but was united to the school at Naples which the Emperor Frederick II chartered as a university in 1224. Bologna was, therefore, really the earliest of the medieval universities, having received a charter from Emperor Frederick I in 1158. Paris received official recognition in 1180 from Louis VII. As already stated these institutions at first taught but one subject and, even when they received a charter, did not always undertake lectures in each of the four faculties—arts, law, medicine, and theology—which constituted the work of the medieval universities. Many of the later universities were started as secession movements from the early institutions, e. g., Oxford from Paris, Cambridge from Oxford, Padua from Bologna, Leipzig from Prague (which was the first German university). But after the early thirteenth century the civil and ecclesiastical authorities vied with each other in the establishment of universities, so that by the end of the fifteenth century there were at least seventy-five in existence.

It is well for the student at the outset of his study of the medieval university to understand the essential differences between a university and a school. They are:

1. The university was chartered by pope, emperor, or king and, therefore, was independent (a) of local ecclesiastical authority—the bishop or the abbot—and (b) of local political dominance—the feudal overlord.
2. Students came from afar. This resulted in breaking down, for higher education, local or provincial ideas.

3. The individual teacher or his doctrine was the drawing power, not simply education in the abstract.

4. The university was for comparatively adult students.

5. Each student took what he wanted instead of a fixed course. The learning offered in the university was rather heterogeneous and not so well organized as in the schools.

Organization of the University.—Students came from all over Europe to hear distinguished teachers, and therefore the entire body of students was known as the *studium generale*. Outside the place of lecture, where all the students met in common to hear the master lecture in Latin, they naturally grouped themselves according to their place of origin, and such groups were called the “nations.” In an age when the foreigner was looked upon with suspicion and usually badly treated it was essential that the students thus group themselves for protection, and at first it was to these “nations” that the civil or ecclesiastical authorities granted privileges. In fact the students imitated the guilds, as is shown by the complete name of their body, *Universitas Magistrorum et Scholarium* (the corporation of masters and scholars). The term *universitas* meant corporation or chartered company and was applied to any legal association that had certain privileges. It was not until the fourteenth century that the term was restricted to the one kind of corporation that devoted itself to study. The real governing power of the university resided in the “nations,” each of which chose a representative every year, called a councilor or procurator, who was to safeguard its rights and control the conduct of its members. The masters did not become organized into the groups called faculties until later, when it became necessary to give a more

systematic organization to scholastic procedure. At first the term *facultas* meant a special department of knowledge, e. g., law, medicine, theology, arts; but later it was applied to the group of masters who taught that special department of knowledge. Each faculty annually elected a dean, and these deans with the councilors of the "nations" formed a "university council" which annually elected the rector, the official head of the university. The rector, however, could exercise only the powers delegated to him. In the South, where the majority of the students were mature and were studying the professional subjects, the rector was for a long time a student, and the "nations" remained in the control of the students. In the North, where the majority of the students were attending the arts courses and were therefore younger, the rector was a master and the "nations" much sooner lost their authority. The Church was represented in the university organization by the chancellor who, however, had no power and appeared only at the public conferring of the degrees.

Privileges of the University.—Generally speaking the privileges granted to the masters and students of a university were the privileges of the clergy which had originally belonged to the teaching class under the Roman Empire. They were: (1) exemption from taxation; (2) exemption from military service; (3) exemption from civil jurisdiction, i. e., the members of the university could be tried in civil and criminal cases only by their own officials; (4) the right to grant the degree, and thereby the right to teach anywhere without further examination; (5) the right to suspend lectures if the university privileges were infringed. If the latter wrong were not at once redressed the university might emigrate.

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Effect on Student Life.—The privileges of the university extended not only to the masters and students, but to their attendants and practically everybody employed in the university. Hence when we read of the large numbers of students that attended a medieval university due allowance must be made for this fact. The possession of their privileges, especially the exemption from civil jurisdiction, which resulted in conflicts between town and gown, made the students a very independent body and enabled them to indulge in excesses which in course of time compelled monarchs to intervene and restrict their privileges. Moreover, many privileges belonged to a student not only while he was in residence at a university but while he was going to and from it. The custom grew up among many unambitious and rollicking students of wandering from university to university, begging their way and leading anything but an exemplary life. These *vagantes* even formed a mock gild and were called *goliardi*, and have handed down to us a considerable literature of Latin student songs voicing their love of the reckless and unrestrained life they led. They became so numerous and riotous that by the fifteenth century some of the towns which they frequented were compelled to pass ordinances for their supervision.

Career of a Student.—Apprenticeship was the method by which a man in the Middle Ages normally attained his vocation. The squire was apprenticed to a feudal lord, the would-be artisan to a master in a gild. So, when the young student went to a university at about fourteen, he was enrolled under a master who was responsible for his studies. Under the supervision of this master he pursued his arts course for a period of from four to seven years, until he could “define and deter-

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mine" terms, which in reality meant to be efficient in reading, writing, and speaking Latin. When he was able to do this to the satisfaction of masters other than his own, he became a baccalaureate, i. e., one who is beginning his candidacy for a degree. In other words the baccalaureate was at first not a degree, but merely a kind of matriculation for a degree; in course of time it was sought as an honor by those who did not intend to teach and it became a degree. When the student had become a baccalaureate, he continued his studies under the supervision of a master and in turn taught younger boys under his supervision. But he might study under a number of masters, and usually did so for a period of from four to seven years until he was able "to dispute," i. e., to defend a thesis in public against the masters. He then completed his apprenticeship, like the journeymen of a gild, by presenting his "masterpiece," his thesis, which, if successfully defended, entitled him to the degree which carried with it the prize of university scholarship, i. e., the *licentia docendi*, the license to teach anywhere. Master, doctor, and professor were synonymous terms in the early university period; when any distinction was made between the master's and doctor's degree it was merely in the manner of acquiring them. The master's examination was private and formal; the doctor's took place immediately afterward in the cathedral into which crowded all the candidate's friends and fellow students, where, after publicly defending his thesis, he was invested with the degree with much ceremony. He was now admitted to the gild of teachers and could teach in competition with all the other masters.

Content of Study.—Early in the thirteenth century the course of study had become thoroly organized. In

the arts faculty grammar was studied from Donatus and Priscian. The works of Boëthius provided the major part of the material for study in rhetoric (which received, however, very little attention), dialectic, arithmetic, and music. Euclid was studied in geometry, and Ptolemy in astronomy. Many additional texts in mathematics and philosophy were obtained from the Arabs. The study of logic overshadowed all others and Aristotle—whose “Ethics,” “Politics,” “Physics,” and “Metaphysics” were added to the “Organon” previously possessed by the schoolmen—was the master whose authority was not to be disputed. In the faculty of theology, to which most of the arts students afterwards went, the greater part of the time was given to Peter the Lombard’s “Sententiae” or to Thomas Aquinas’ “Summa Theologiae.” In the faculty of law the course was divided into two parts, civil and canon. In the former the “Corpus Juris Civilis” was the authorized text, and in the latter the “Decretum” of Gratian. In the faculty of medicine the Greek treatises of Hippocrates and Galen, the “Canon” of Avicenna, and some of the medical works of the Saracen, Jewish, and Salernian doctors were the chief texts studied. The authorized texts in all the professional schools were accompanied by many commentaries.

Methods of Study.—The aim of teaching in a medieval university was to impart a knowledge of the subject matter and an ability to debate about it. Because of the lack of manuscripts the lecture method was used to impart the subject matter, and it usually took the form of dictation. The training in debate was given by means of the formal disputation, in which one student or group of students was opposed to another. This resulted in the development of keen and subtle debaters;

but it is a question whether the disputation and the study of a limited number of texts of unquestioned authority in each field could develop free and profound thinking. The effect of the scholastic method, which was the method of the medieval university, has been discussed above, under scholasticism.

Influence of the Medieval University.—The influence of scholasticism—which has also been considered—was one of the chief influences of the medieval university, wherein scholasticism found lodgment. But there were other great influences resulting from the existence of the universities. The gathering together of hundreds of young men from all over Europe had a most beneficial effect in modifying national prejudices among them, and when they returned home they became agents for the distribution of a spirit of tolerance as well as of learning. Moreover, the university symbolized the supremacy of mind over brute force. Directly, it had a most pervasive influence upon education. It sent out large numbers of well-equipped teachers at a time when they were most needed, and it compelled the lower schools to improve their work in order that their graduates might enter the university. The self-governing organization of the early university permitted a freedom of discussion on many problems, political and theological, which enabled it often to be the arbiter in controverted questions of church and state. It was in recognition of this political influence that the university was given representation in the parliaments of France, England, and Scotland. In fact it was the opinion of the university that was most feared by rulers in church and state.

The Universities and the Friars.—A discussion of the medieval universities cannot be closed without a brief consideration of the remarkable influence exerted upon

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them by the new orders of mendicant friars, the Dominicans and the Franciscans. During the eleventh and twelfth centuries there had been an increasing decay in the Benedictine monasteries and in the monastic schools attached to them. In the following century St. Francis of Assisi founded his order of gray friars (1212) and St. Dominic his order of black friars (1217), to go out and work among the people, living on charity, preaching the gospel, and, by setting an example of piety and self-sacrifice, awakening spirituality among the faithful. The fact that these orders were primarily preaching orders, as previous orders had not been, would result in an emphasis upon the education, first of their own members in order to preach, and then of their auditors. In their desire to spread their work among all classes they soon saw the necessity of becoming associated with the newly established universities, and before the close of the thirteenth century they were in control of higher education. All the great schoolmen were friars—Albertus Magnus and his great pupil Thomas Aquinas were Dominicans, while Duns Scotus and William of Occam were Franciscans. At first they were united in their efforts, but soon a rivalry sprang up between the two orders and each sometimes accused the other of teaching heretical doctrines—a healthful condition, since it aroused discussion and inquiry. On the whole the Dominicans were the guardians of orthodoxy, the Franciscans the initiators of new movements in philosophy and theology.

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QUESTIONS, COMPARISONS, AND TOPICS FOR FURTHER STUDY

1. Is monasticism peculiar to the Christian religion?
2. Does the pagan or the early Christian attitude towards the body conform more closely to that of education today?
3. Compare the seven liberal arts with the curriculum of an American high school.
4. Did the seven liberal arts conform to the modern aim of education as "adjustment to the social environment"?
5. Explain why learning remained vigorous so much longer in Ireland than on the Continent.
6. Compare the part played by Charlemagne in the revival of learning in the ninth century with that of Horace Mann in the public school revival of the nineteenth.
7. Compare the work of the Palace School with that of a state normal school today.
8. Compare the work of the *missi dominici* of Charlemagne with that of a county or district superintendent in the United States.
9. Compare the training of the body given under chivalry with that given by the Greeks.
10. Compare the ideals of the ephebic oath with that taken by a knight on the day he was knighted.

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11. Why did not the remarkable advance in science made by the Saracens in Spain have a greater effect upon Christian Europe?

12. Does the work of Thomas Aquinas in organizing knowledge into encyclopedic form resemble in any way the similar work of Herbert Spencer?

13. In what respect as to origin do the medieval universities, the philosophical schools of Athens, and the schools of the Prophets among the Jews resemble each other?

14. Compare the gradual growth in organization of a medieval university with that of an American university, such as Columbia.

15. Is the "Wanderjahr" of the Germans a survival of the practice of the wandering students of the Middle Ages?

16. Is the preceptorial system at Princeton a survival, via Oxford, of the system of apprenticing students to masters in the medieval university?

17. Compare the influence of the medieval university upon public opinion with that of the university in Russia today.

PART III

THE TRANSITION PERIOD

Characteristics: The emergence of the individual from institutional control. The "humanities" vs. the "divinities." The rise of secular interests and the increasing demand for secular control of education.



CHAPTER VIII

THE RENAISSANCE

Outline.—After the Crusades European society gradually became more interested in secular affairs. There resulted the Renaissance, the revival of an old, long-forgotten way of looking at life, i.e., the pagan view, with its joyous, self-reliant attitude towards present as against future life. Hence attention was directed to the literatures of Greece and Rome, which were termed the “humanities” as contrasted with the “divinities” of the prevailing education.

The Renaissance first developed in Italy where it was characterized by its appeal to the esthetic emotions. The movement was greatly accelerated by the patronage of the tyrants of the cities who established *court schools*, the finest of which was that of Vittorino da Feltre at Mantua.

The way for the Renaissance in the North had been prepared by the fine work of the Brethren of the Common Life who were interested in social as well as educational reform. The movement in Teutonic countries took on a reform aspect, as illustrated in Erasmus, and gave much attention to Christian literature.

Both in the North and the South, the early Renaissance movement, characterized by an enthusiasm for the classical literatures, degenerated into a fixed and formal study of the structure and style of the classical languages. This was known as Ciceronianism and was best typified by Johann Sturm who standardized the work of the German gymnasium.

The Passing of the Middle Ages.—The thirteenth century was the heyday of the medieval period. The unity

of life and of ideas—political, religious, and intellectual—and the dominance of authority, which characterized it, began to give way in the fourteenth century, as the result of the new forces which were springing into life. The necessity of transporting thousands of crusaders and their equipment had resulted in the revival of sea-ports and cities. The burgher class which thus arose, composed of the merchants and the masters of the guilds, formed a caste distinct from nobles, clergy, and serfs, into which medieval society had been divided. The needs of this new class were different from those of the other classes, and this fact was reflected in their education. In the later Middle Ages there arose *gild schools*, which usually gave elementary instruction in the vernacular as a foundation for the industrial education received by the apprentices in the guilds themselves. *Chantry schools*, founded upon bequests left by wealthy patrons to support priests who were to chant masses for the repose of the souls of these patrons, also increased in number in the later Middle Ages. As these priests had much unoccupied time, they were expected to give instruction to the children of the neighborhood, and sometimes, thru a union of chantry foundations, strong schools of large size flourished in the big towns. As the result of the growth in numbers and influence of the burgher class and of their acquiring control of the government of the cities, these various kinds of schools were often united into *burgher schools*. Tho these schools were usually under religious influences, the teachers were generally secular priests, not monks, and the number of lay teachers gradually increased. Moreover, the burgher schools were supported and often controlled by the public authorities and gave instruction in subjects of a more practical nature than had hitherto been the case. As a result of the

rapid establishment of these various kinds of schools in the fourteenth and fifteenth centuries, it can justly be stated that quite generous provision was made for elementary and secondary education.

Nature of the Renaissance.—The crusaders had discovered that the people of the East were not only more intelligent, but also they lived better and had better things to eat and to wear. As a result of the contact there grew up a demand for the products of the East which caused not only a growth of commerce but a taste for the good things of this life. In fact men became interested more and more in the life of the present world. The joy of living, the interest in the beauties and wonders of nature, the wish to know more of man's social relations, of his real desires, ambitions, and duties grew with every year. The life of the monk became relatively less valued. "Otherworldliness" began to give way to the interests of this world. That was the first characteristic of the Renaissance. It was a rebirth, indeed, a revival of an old long-forgotten way of looking at life, the ante-Christian way. Where was a knowledge of things human as against things divine to be found? Surely not in the literature of the past thousand years. That was devoted to the other world; to divinity, not humanity. In the ancient literatures of Greece and Rome humanity and the things that interest and concern humanity in this life were discussed. Hence attention was directed to the classical literature. From this source have arisen the terms *humanities*, *humanism*, and *humanists*, which have become associated with this movement. With the revival of the classical models, however, the humanists slowly developed national literatures of poetry, drama, and romance, which eventually rivaled the models. A second characteristic of the

Renaissance was the emphasis upon individuality. In the Middle Ages the individual counted for nothing. He had no rights except as a member of a group or institution, such as the gild, the university, or the monastic order. During the Renaissance the old Athenian emphasis upon personal worth and excellence was revived. The opportunity for personal self-realization as against rigid institutional control was demanded and realized.

The Invention of Printing.—Fortunately, when the Renaissance movement had become well established, printing was invented (c. 1450). This gave a very great impetus to the spread of the so-called “New Learning.” The multiplication of books resulted in the lowering of their price to one-fifth of what it had been and brought them within the means of multitudes who had been without them. A perfect mania for ancient manuscripts spread thruout Europe. Monastery and castle were ransacked to find them, and then they were immediately reproduced upon the printing presses. As a result libraries arose in many of the large cities, e. g., the celebrated Vatican library at Rome. These increased facilities for learning led naturally to a comparative study of accepted authorities, and the historical criticism which resulted was very destructive to accepted belief in all domains of thought.

The Scientific Discoveries.—This result was accentuated by the scientific discoveries resulting from the spirit of investigation which had been aroused. The explorers showed that the earth was round and not flat. Copernicus demonstrated a little later that the sun, not the earth, was the center of our system. Authority had been mistaken upon these things; might it not be mistaken upon others? The old unity of life and ideals could not stand the onslaughts of skeptical criticism.

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Men rejected the authority of abstract conceptions and demanded proofs of a concrete and real nature. These tendencies did not dominate at first, but they were apparent from the beginning. The mistake is sometimes made in textbooks of associating the Renaissance in time with the fall of Constantinople in 1453. Tho the movement was greatly accelerated by that event which provided western Europe with a literature of far greater value and beauty than the Latin, nevertheless the Latin revival was in full swing before that event happened. Petrarch (1304-1374), who is usually referred to as "the first modern man," and who was the embodiment of the early Renaissance, died eighty years before the fall of Constantinople. By that time the spirit of modern times was not only ushered in but was in process of gaining control.

A. THE RENAISSANCE IN ITALY

To no country had the Crusades been of so much benefit as to the cities of Italy. The commerce that had resulted made them rich and intelligent. Tho suffrage was restricted they were nevertheless democracies, and political activity made them keen and wide-awake. In Italy, moreover, the classical literatures had never entirely disappeared, tho there had been little appreciation of their beauty or content. Now a mania for everything that had to do with the Greco-Roman period swept thruout society. The revulsion against the "otherworldliness" of the medieval period became so pronounced as to cause a reversion to paganism in many adherents of the New Learning. The greatest admiration for the Greek view of life prevailed, and devotion to the classical literature and delight in its esthetic appeal were characteristic of the Renaissance in Italy. It was essentially

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an individual and personal matter. Men studied the classical literature devotedly for the personal pleasure it gave them, not in order that they should thereby be better enabled to improve society. Hence it was an aristocratic movement. The movement, moreover, went thru several stages. The early period was marked by the revolt against tradition and authority, and an emphasis upon individualism in all its phases. As the number of scholars familiar with the New Learning increased, it gradually became organized for purposes of instruction. Unfortunately with organization it became more and more formal and devitalized until, by the beginning of the sixteenth century, it had degenerated into the inconceivably narrow educational system known as Ciceronianism.

Petrarch (1304-1374) was the very embodiment of the early Renaissance spirit. No one attacked tradition so boldly or satirized the scholastic work of the schools and universities so successfully. He had a marked fourfold influence in spreading the New Learning. First, he devoted himself during his extensive travels to collecting manuscripts of the old Latin writers, which he caused to be copied and widely distributed; secondly, in his numerous letters he tried successfully to inspire every friend with a love of the New Learning; thirdly, he wrote a number of Latin works—including his "Letters to Famous Men," addressed to the ancient worthies such as Homer, Virgil and Cicero—which had a great effect upon his day, tho they were soon superseded. Finally, in his condemnation of scholastic and patristic writings, he delivered the final great blow to the master, Aristotle. "I am confident," he writes, "that he was in error all his life." For Aristotle he substituted Cicero. It is his sonnets, however, which were written in the vernacular,

that give him his place in the history of modern literature.

The Recovery of the Greek Heritage.—Petrarch and his contemporaries for the most part knew no Greek, but toward the close of the fourteenth century Greek scholars came to Italy to teach. The greatest of these was Manuel Chrysoloras (1350-1415). He had been sent in 1393 by the Byzantine emperor to secure aid against the Turks and was urged to stay in Italy. Later he returned and started schools for instruction in Greek in the principal cities of northern Italy. Moreover, he made translations of some of the Greek authors, and wrote a work on Greek grammar which became the standard in Italy. Among his pupils were some of the most renowned scholars of the succeeding generation, who did great service in spreading knowledge of the Greek language and literature thruout Europe.

Vittorino da Feltre (1378-1446).—One of the most potent influences in the spread of the New Learning was the increase in the number of tyrants who held control of the governments of the Italian cities in the fifteenth century. Desirous of making some return to the people for the latter's loss of political power, they vied with each other in making their cities illustrious as centers of the New Learning by the collection of manuscripts, the establishment of libraries, the support of distinguished scholars, and the founding of new schools. The new schools were necessary because the existing schools and the universities were at first strongly antagonistic to the New Learning. The most important of these schools was that which was founded by the Prince of Mantua and placed under the control of Vittorino da Feltre, one of the most scholarly men of this time, who was thoroly imbued with the New Learning.

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The Court School.—The court school aimed primarily to train the young nobles of the court for political and social life, but Da Feltre invited to his school the sons of friends and neighbors and even children of the poor. The organization of the school was much influenced by Athenian ideals; hence we find that physical training received great attention, in the form of swimming, fencing, boxing, riding, and dancing. Emphasis was placed also upon deportment and manners, and they were developed under strong moral and religious influences, for Da Feltre was a devout Christian. However, it was the literatures of Greece and Rome that received most attention, and they were taught for an appreciation of their beauty as well as for the knowledge they gave of the institutions and ideals of the classical peoples. In his work Da Feltre realized some of the finest principles of modern education. He adapted the training of each individual to his particular needs and capacities, thereby arousing interest in the studies and eliminating the harsh discipline so prevalent in his day. Da Feltre had a profound influence upon his own time. It was only after his death that the narrow and formal training known as Ciceronianism gained control. As this decay characterized the whole later Renaissance movement, we shall study it after considering the Renaissance in the North.

B. THE RENAISSANCE IN NORTHERN EUROPE

The Brethren of the Common Life.—While the Renaissance was taking place in Italy, an educational movement of deep significance was making headway in the North. In 1376 there was established at Deventer, Holland, an organization of pious and social-minded men called the Brethren of the Common Life, or the

Hieronymians. Tho the members lived in communities, they were not bound by religious vows or rules and could leave the organization at will. They supported themselves chiefly by copying manuscripts. Their aim was to combat the ignorance of the lower classes and to inspire in them, thru a knowledge of the Scriptures, a higher ideal than that of mere physical existence. Their purpose at first, therefore, was chiefly religious and their purely educational work was confined to helping poor scholars at the various schools to maintain themselves. They soon undertook to teach backward students so as to enable them to benefit by the school work. In this they were very successful; owing to their willingness to meet the needs of the students and their disdain of the rigid and formal methods of the established schools. Their success attracted attention and they were invited to take charge of existing schools and to open new ones. They broadened the content of study and improved the methods of teaching. In a comparatively short time they spread over a large part of northern France, Germany, and the Netherlands, founding numerous schools which outshone those already in existence. Wandering scholars from Italy bringing the treasures of the New Learning with them were received with enthusiasm by the Brethren and soon their schools became the centers from which the new education radiated. Many of them went to study in Italy and returned to give instruction in the New Learning in their schools. For example, Rudolphus Agricola was very successful in inspiring a love of the classics, and Johann Reuchlin virtually gave Hebrew the standing of a third classic. The way for the Renaissance in the North was well prepared, therefore, by the Brethren, and the two aspects which it assumed in the North, the pious and the educational, were incarnated

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in the life and works respectively of Thomas à Kempis and Erasmus, two of their most distinguished products. The introduction of printing deprived the Brethren of their chief means of support, and the competition of the Jesuits and the religious troubles of the sixteenth century drove them out of the educational field.

The New Learning in France.—It has already been mentioned that wandering scholars from Italy carried the New Learning with them to the northern countries of Europe. An even greater result followed the attempt on the part of the French king, Charles VIII, to conquer northern Italy. In this he failed, but he and his nobles were brought into contact with the new culture of northern Italy and they invited scholars to return with them to France. The result was that the New Learning made a rapid conquest in France and institutions so far removed as the Collège de Guyenne at Bordeaux and the Collège de France at Paris, founded by Francis I (1515-1547), became centers of great influence. For a generation, in fact, Paris was the chief center of the New Learning in the North and from it, largely thru the work of the Brethren of the Common Life, it was carried into the Teutonic countries.

Characteristics of the Renaissance in Teutonic Countries.—In the Teutonic countries the Renaissance assumed a different character. The appeal to the esthetic feelings was not so emphatic as in Italy. The New Learning was valued not only as a source of individual happiness, of personal self-culture, but as an instrument of social reform. Hence not only the pagan literature of the ancients, but also the works of the Church Fathers had a place in the new education. The interpretation of the Old Testament for purposes of moral and religious

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reform required a knowledge of Hebrew, and this followed quickly in the wake of Greek. The movement in the North assumed far more the nature of a crusade against ignorance as the mother of all social evils than in the South, and was necessarily more democratic in its appeal. As the Church was the dominant institution of the times, it was naturally blamed for the ignorance, greed, and corruption that prevailed. The emphasis upon individual freedom as against institutional control that characterized the whole Renaissance movement took on in the North the character of a revolt against authority in religion, and the Renaissance was the parent of the Reformation.

Erasmus (1467-1536).—Erasmus was the incarnation of the Renaissance in the North and represents the union of the biblical and classical elements in the New Learning. He had received his early education from the Brethren of the Common Life at Deventer, but deepened his knowledge of Latin and Greek literature at Paris, at Oxford, and in Italy. He spent many years of his life as an itinerant scholar, in universities in England, France, Germany, and Italy, and he was everywhere received with acclaim. He exercised an influence upon his day with which only that of Darwin upon the nineteenth century is comparable. This influence he used during his long scholastic career to fight ignorance and hypocrisy everywhere, but especially among the monks. Nevertheless he expected reform to come as the result of a campaign of education and was opposed to the rupture with the Church made by Luther, though the latter maintained that he was merely realizing the teachings of Erasmus.

Influence of Erasmus.—Erasmus' influence was exercised in several ways: (1) in his teaching in the uni-

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versities; (2) in his vast correspondence with scholars everywhere; and (3) in the numerous books that he wrote. His written works, which are all in the Latin language, fall into two general classes: religious and educational. In order to provide men with an accurate knowledge of the Scriptures and of the Church Fathers, he published first an edition of the New Testament in Greek and later a translation into Latin, and also edited the works of St. Jerome and some of the Greek Fathers. Even his educational writings were intended for reform purposes, and some of them were satires. His "Colloquies," which was used as a textbook in the new schools that were arising, consisted in part of dialogues that satirized social evils existing. His "Praise of Folly" was a satire directed against the corrupt practices that prevailed among the monks. "The Ciceronians" was another satire upon the narrow humanists who were already restricting the New Learning to a formal study of Cicero and his works.

Not all his educational works were satires, however. In his "Liberal Education of Children," and "On the Order of Study," Erasmus makes admirable suggestions in regard to the education of children. The importance of studying the character of the child, the place of play and games, the opposition to brutal discipline, the methods of teaching grammar and literature, all receive careful and wise consideration. The importance of keeping education in vital association with the needs of society and of securing the necessary knowledge to that end by the study of a large number of classical authors was strongly urged by Erasmus. Finally he was one of those who believed that women should have the same educational advantages as men. His fine influence upon the content and method of teaching prevailed thru-

out Europe and was reflected for a long time in the works put forth by scholars in every country.

The German Gymnasium.—An educational movement of such extent and influence as the Renaissance in the North would inevitably become organized into an institution. In fact schools of various kinds arose at first in Teutonic countries before they became standardized in the Gymnasium. Of the other schools the most important were the *Fürstenschulen* (princes' schools) modeled upon the court schools of Italy and intended to educate leaders in church and state. They in turn were merged in the Gymnasium system, which became the very core of the educational organization of Teutonic countries and has remained so to this day. With organization the spirit of the Renaissance movement underwent a great change. The early Renaissance scholars were enthusiastic over the classical literatures chiefly because of the value and beauty of the content. The Latin and Greek languages were to be studied as a means to an end. But with the necessity of organizing school classes and of grading subject matter in difficulty, an undue emphasis was placed upon the linguistic side of the classics, which resulted in a formalizing of school work; and had a very deadening influence upon education. Lists of Latin words and phrases, a careful study of the intricacies of grammar, syntax, and prosody became the first burden of the pupil. The boy entered the Gymnasium at about nine years of age without a knowledge of the vernacular grammar and was at once plunged into a study of the grammar of a foreign language, and, what is more, a grammar written in that language. The resulting burden upon the memory is evident, and learning by heart, of necessity, became the chief method of study. Instead of the wide range of classical authors recommended by

the early humanists, the work of the Gymnasium was confined to the thoro study of a few. In fact in some places the aim of education was to develop in the individual the ability to read, write, and speak Latin with Cicero as a model. A fine style, a correct form of expression, was the desideratum, and by the end of the sixteenth century the old scholasticism with Aristotle as master and dialectics as content had given way before a no less narrow scholasticism with Cicero as master and linguistics as content. To treat the child mind as an adult mind, to organize grammar in the purely logical manner fit for the latter, meant to kill interest in study and to enforce discipline by harsh measures. This system prevailed thruout Europe in the Protestant Gymnasium and in the Jesuit college during the seventeenth and eighteenth centuries and made a dreary period, indeed, in the history of education.

Johann Sturm (1507-1589).—The Gymnasium in most cases was not a boarding school, but a pay school organized under municipal control. It developed independently in a number of places, but the Gymnasium founded by Johann Sturm at Strassburg in 1537 is typical. Sturm was one of the narrow humanists who did more than any other individual to standardize the work of the new school. He had a great influence thruout Germany as the result of the publication of his textbooks and the training of teachers in his Gymnasium, and his advice was frequently sought by princes and cities in the organization of institutions. His school was attended by large numbers of students, many of them nobles, and became a model that was freely imitated. It was organized into ten classes—the Gymnasium was afterwards reduced to nine—and attention was devoted almost exclusively to Latin and Greek. The vernacular was wholly

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neglected as was also physical training; no mathematics or natural science found a place in the curriculum and no attempt was made to relate the school to the social needs of the time. Emphasis was laid upon the life of a past era with the difference that formalism had killed the esthetic spirit which had characterized that life.

The Renaissance in England.—The New Learning had been received with enthusiasm in England. Some fine English scholars visited Italy to study Greek, and upon their return brought with them other distinguished scholars, like Erasmus, who was the first professor of Greek at Cambridge. The court of Henry VIII was strongly affected by the movement and humanism received powerful support from Sir Thomas More and Cardinal Wolsey.

Roger Ascham.—One result of the movement in England was the educational treatise of Roger Ascham, professor of Greek at Cambridge and tutor in the classics to Queen Elizabeth. This book, called "The Scholemaster," gives the typical humanistic view of education, but condemns some of the practices prevailing in the schools, such as brutal corporal punishment. It is chiefly devoted to a description of the best method of teaching Latin and Greek. Ascham's method was an improvement upon the one prevailing in English schools, its chief characteristic being the "double translation." The pupil was required to translate a passage into English and then an hour later to retranslate it into the original. The master then compared it with the text. Ascham's book had practically no influence upon the schools either in discipline or methods of teaching.

John Colet.—One of the most influential of the humanists in England was John Colet, dean of St. Paul's. In 1509 he founded, upon a humanistic basis, St. Paul's

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School, which was typical of the best results of the Renaissance in the North, emphasizing religion and the classics in its curriculum. Colet had hoped to secure Erasmus as its first headmaster; but Erasmus recommended William Lilly, who later wrote a Latin grammar that was used in England well into the nineteenth century. Some of the aristocratic private schools of England—known as “public schools” because independent of both Church and state—and many of the grammar schools which survived the Reformation, as well as many new foundations, were modeled upon St. Paul’s. But by the beginning of the seventeenth century the work of these humanistic schools had become more narrow and formal than that of the Gymnasium in Germany and they remained divorced from the affairs of practical life until the investigation of the Royal Commission of 1864. Moreover, when the colonists left England to settle in America, they naturally brought with them the educational institution with which they were familiar. We find a Latin grammar school in Boston as early as 1635 and similar secondary schools spread thruout the colonies. Like their prototypes in England they gave an education in the classics and the New Testament in preparation for the college course which was to train their students, in the northern colonies at least, for the ministry.

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QUESTIONS, COMPARISONS, AND TOPICS FOR FURTHER STUDY

1. Compare the influence of the Sophists in Greece with that of the wandering humanistic scholars from Italy in northern Europe.

2. Compare the influence upon intellectual life made by the Revival of Learning in the fifteenth century with that made by the scientific discoveries of the nineteenth century.

3. Compare the absorption of Hellenic civilization by the Romans with the absorption of Greco-Roman civilization by western Europe in the Renaissance.

4. Compare the school of Isocrates at Athens in 390 B.C. with that of Vittorino da Feltre at Mantua A.D. 1440.

5. In what respect can Erasmus and other humanistic students of the Bible and of the Church Fathers be considered the forerunners of the higher criticism of today?

6. To what extent can the Renaissance in Italy be considered a patriotic revival?

7. What reasons can be adduced to explain why the Renaissance movement in the North should have been characterized by a reform aspect so much more than in Italy?

8. Point out the resemblances and differences between the Renaissance movement in northern Europe and the movement for social reform in the United States at the present time.

9. Compare the views of Erasmus with those of Quintilian on the early education of children.

10. What elements of his curriculum did Da Feltre borrow from the Greeks? From the knights? From the Church?

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11. Compare the influence of the sojourn of American students at German universities today upon culture and education in the United States with the influence of the sojourn of English students at Italian schools during the early Renaissance upon English culture and education.

12. Compare the attitude of the Church towards the New Learning in the fifteenth century with the attitude today of the Church (Protestant and Catholic) towards such biological theories as evolution.

13. Is there much likelihood that vocational subjects will drive the humanistic subjects out of education today as the humanities drove the divinities out of education in the Renaissance?

CHAPTER IX

RELIGIOUS FORMALISM IN EDUCATION

Outline.—The Reformation emphasis upon a knowledge of the Bible as necessary to eternal salvation had as an educational corollary an ability at least to read it, and this was a stimulus toward universal elementary education. To secure that end Luther in his letters and sermons advocated state-supported schools, which should have new elements in their work.

Melanchthon aimed to make the Reformation acceptable to the learned of Germany and first organized Protestant education in the Saxony school plan. The educational ideas of John Calvin had great influence in Switzerland, the Netherlands, Scotland, Huguenot France, Puritan England and America.

The Jesuits organized Catholic secondary education in their "inferior" colleges upon a narrow humanistic basis, and higher education in their "superior" colleges with philosophy and theology as content. The "Ratio Studiorum" prescribes in detail the content and method of work, the discipline, the training of teachers, etc. Adherence to its prescriptions resulted in remarkable success. But it delayed the Jesuits in organizing their schools to meet new conditions.

The Jansenists of Port Royal appealed to the understanding rather than to the memory, hence they taught in the vernacular. They also added mathematics and logic to the curriculum, and made reforms in methods of teaching and in discipline.

Elementary education was well organized for the Catholics by the Institute of the Christian Brothers founded by La

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Salle in 1684. They also introduced the class recitation system and provided for the training of elementary school teachers, two notable reforms.

A. THE PROTESTANT REVOLT

The Reformation the Outcome of the Renaissance.—
The complaint of Luther that he had but hatched the egg laid by Erasmus and the retort of Erasmus that he had laid only a hen's egg but that Luther had hatched a game-cock indicates the close relation between the Renaissance and the Reformation. The Renaissance leaders emphasized the individual's place in life. Social control as exercised through human institutions had gone so far, they found, as to leave little opportunity for the free expression of individuality in any direction. The humanists emphasized human reason as the individual's guide in life. They adopted a critical attitude towards whatever rested upon mere authority, and showed scant respect for tradition. The Reformation completed the work of the Renaissance in exalting the intrinsic worth of the individual. It was impossible that an institution like the Church, which had guided and controlled the lives of men for a thousand years, should escape the critical and investigative spirit of the times. The Church had acquired great wealth and power and undoubtedly abuses existed in its administration. We find, therefore, that even before Luther's revolt practically every humanist had made insistent demands for reforms in the Church. At first the reforms demanded were of a moral nature: that the clergy lead better lives, that high churchmen perform the duties that were attached to their big incomes, that the monasteries especially give some evidence of social utility. But with the zeal of the human-

ists, with their mania for the study of original sources of the Old and New Testaments and the Church Fathers, it was inevitable that the doctrines and practices of the Church should be questioned.

The Reformation Principles.—All the reformers, therefore, were humanists, Luther the least of them. In the new education religion was to provide the purpose, humanism the content. Whatever their divergences of belief might be, the reformers at first agreed upon two things: (1) that the Bible, not the Church, was the infallible rule of faith and practice, the guide to what one should believe and how one should live; (2) that the individual must interpret for himself what was in the Bible. This placed a splendid emphasis upon human reason and, had the Protestant leaders remained true to their first principles, western civilization might have been advanced a century beyond what it is today. But the promise of the Reformation was not realized. With the multiplication of sects each hating each other as much as they hated the old church, with social excesses like the Peasants' Revolt, which it was claimed was the fruit of the reform preaching, the right of reason to determine faith became more and more denied until it existed nowhere in Europe, among either Protestants or Catholics. The interference of the Church continued in things extra-religious, in questions of politics, science and philosophy, where reason alone should guide. Nevertheless a door had been opened which could not be shut, ideas had been promulgated which were destined eventually to have great results, and there were some immediate effects of direct and lasting benefit.

The Educational Significance of These Principles.—The principle that eternal salvation, which was the chief concern of people in the sixteenth century, depended

upon following the precepts of the Bible had certain natural educational consequences. (1) The first of these was that people were able to read the Bible. This meant an enormously increased reading public receiving their culture chiefly from that book. The invention of printing advanced the cause of the reformers immensely, as it had that of the humanists. It is to be noted that, whereas previous to the Reformation nearly all the books printed were in Latin and Greek, after it the majority were in the vernacular tongues. (2) A second consequence was an emphasis upon the vernacular languages, for the Bible had to be rendered into the vernacular in order to reach the people. There were other German editions of the Bible printed before Luther's, but in dialects not widely spoken. Luther set the standard for the literary German of the future. Calvin's "Institutes of the Christian Religion" helped make the standard for French prose, and Tyndale's New Testament for English. (3) A third consequence was a demand for the extension of elementary schools in which at least the ability to read the Bible should be given—to girls as well as to boys, since they also had souls to save. It can hardly be questioned, however, that the generation after the Reformation in Germany was not so well provided with elementary schools as the generation before, because the first necessity was to train religious leaders and that meant to turn attention to the Latin schools. But a new and compelling basis for elementary education was provided.

These consequences were the natural outcome of the life and work of Martin Luther.

Martin Luther (1483-1546).—Luther was a miner's son. His father was able to give him a good education and sent him at eighteen to the University of Erfurt to

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study law. But at twenty-two he became a monk and at twenty-five was appointed a teacher of philosophy at Wittenberg. It was during his incumbency of this position that he worked out his doctrine of justification by faith, viz., that man cannot be saved by "good works," such as penance and fasting, but by faith alone in the merits of Christ. He came to this conclusion thru a study of Augustine and primitive Christianity, and attacked the scholastic theology and Aristotle with great vigor. It can hardly be doubted that Luther had no intention at first of breaking with the Church, but was led by circumstances from one radical step to another. In the latter part of his career he became exceedingly conservative. Whereas he maintained in his early days that "surely what is contrary to reason is contrary to God," after he had established his position he held that "the more subtle and acute reason is, the more poisonous a beast it is."

Educational Work of Luther.—Luther's first educational influence was thru his translation of the Bible into German, his publication of catechisms, one for children and the other for adults, and his composition of hymns. These provided the entire German people with material for reading and devotion in church and at home, and had a pronounced cultural effect. More specifically his influence upon education was made thru his "Letter to the Mayors and Aldermen of All Cities of Germany in Behalf of Christian Schools" and his "Sermon on the Duty of Sending Children to School." In these two statements we find definite opinions in favor of positions which mark a real advance. (1) The first of these positions was that the state should support and control elementary schools, to which parents should be compelled to send their children. This was as

necessary for the welfare of the state as for the salvation of the child. In order that all children—boys and girls—might attend these schools, they were to be so organized that the children might attend an hour or two a day and devote to their practical duties the rest of the day.

(2) The second progressive step which he advocated was that the work of these schools should be carried on in the vernacular, and in addition to imparting the elements, they should have as their chief aim to give a direct knowledge of the Bible. (3) The third was that the brighter pupils, “who give promise of becoming accomplished teachers, preachers, and workers,” be given a humanistic education in Latin, Greek, and Hebrew. But he improved upon the practice of the humanists by demanding that history, natural science, music, and gymnastics also have a place in the curriculum. Moreover, he made some excellent pedagogic suggestions, such as to teach a foreign language by practice rather than thru grammar, to allow for the natural activity of children, and to deal with concrete things. Nevertheless, his suggestions about schools were by no means generally realized in practice.

Philip Melanchthon (1497-1560).—Luther’s work was primarily religious and only incidentally educational. His educational views were realized in part by his disciples, especially by Philip Melanchthon. Melanchthon was a grand-nephew of the Hebrew scholar Reuchlin, and he had a splendid training in the New Learning, becoming, indeed, its chief exponent in Germany. So great was his influence upon educational development that by general consent he received the title of *Praeceptor Germaniae*, i. e., Instructor of Germany. This title was fully deserved, (1) for Melanchthon was the most popular professor at Wittenberg and his lectures on Protestant the-

ology, which he was the first to formulate, drew hundreds of students to the University. (2) His students became teachers in most of the universities and Gymnasien of Protestant Germany, for no one's advice on educational matters was sought by princes and cities so much as his. (3) His textbooks on Latin grammar and Greek grammar were almost universally used in German schools, and his texts in other subjects, especially dialectics, rhetoric, and ethics, were highly valued. (4) Finally, in 1528, he was requested by the Elector of Saxony to organize the schools of that state. The Saxony school plan which he formulated provided for a Latin school in every town and village of the Electorate. From these municipal schools, modified by Sturm¹ and others, eventually was evolved the Gymnasium, which, as has been said, became the very core of the German educational system. The Saxony school system, which was the first state school system in history, was much improved upon by the Würtemberg plan of 1559. For while the Saxony plan dealt only with secondary schools, the Würtemberg plan provided a comprehensive educational system, from vernacular schools teaching reading, writing, counting, sacred music, and religion, thru Latin schools of six classes teaching the classics, up to the university. The Würtemberg plan was gradually adopted with modifications by the other German states. It is to be remembered that the narrow humanism elaborated by Sturm at Strassburg differed only in extent from that of Melanchthon. Melanchthon was the best representative of the union of humanist and Protestant in northern Europe. He succeeded in making the Reformation acceptable to the learned as Luther had made it acceptable to the common people.

¹See p. 126.

Influence of John Calvin.—Luther's influence was by no means so international as that of John Calvin, who was the first Protestant to organize an elaborate system of theology. Geneva under him became a Protestant Rome to which exiles from France, England, Holland, and Scotland fled. They brought back to their home countries the Reformed instead of the Lutheran faith, as well as the educational ideals which prevailed at Geneva. Calvin established colleges at Geneva and elsewhere in Switzerland and succeeded in inducing Corderius, one of the most distinguished humanists at Paris, to go to Geneva to help organize and to teach in them. These colleges were similar to the humanistic secondary schools of Germany, combining the teaching of religion and the classics. They were widely copied by the Huguenots in France and by the Dutch. The greatest educational influence of Geneva, however, was upon Scotland thru John Knox. He succeeded in establishing the free elementary schools under the control of the parishes, which have done so much for the enlightenment of the Scotch people.

The Reformation in England.—Tho the English humanists like Sir Thomas More and John Colet had demanded reforms in the Church, the Reformation in England was far more a political than a religious movement. Henry VIII never accepted the religious principles of the Reformation; and the Puritans, not the Church of England, were its true exponents and spiritual representatives. Hence the destruction of the monastic and chantry schools, which accompanied the suppression of the monasteries, was disastrous for education in England. Not all of the wealth secured in that way by Henry VIII and Edward VI was used for the establishment of Protestant schools. Tho some repair of the evil

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was made in secondary education in the reign of Elizabeth and the first two Stuarts by the founding of new grammar schools, practically nothing was done in elementary education. England remained two centuries behind other Protestant countries in providing adequately for either secondary or elementary education. This was partly due to the fact that, whereas Germany tended toward a state educational system, England tended toward a church educational system. The schools that withstood the shock of the Reformation and the new schools that continued to be founded, until the Civil War put an end to the movement, retained the old administrative machinery, adopted the narrow humanistic curriculum, and substituted the Anglican for the Catholic faith. In America the Puritans who settled New England and the Huguenots and Dutch Reformed who settled in other colonies north of Virginia realized Protestant principles by the establishment of both elementary and secondary schools which were thoroly religious in character. The secondary schools, as already stated, combined religious with classical training and aimed at the preparation of Christian ministers. In the Southern colonies, where the Church of England was supreme, comparatively little was done for the cause of education.

Formalism in the Protestant Schools.—The formalism which even previously had begun to characterize the humanistic schools was much intensified by the Reformation. Christianity became identified again with theology. Subscription to a creed rather than right living was the evidence of a man's religion. To inculcate that creed in the young was the first task of education, and the catechism was added to the Latin grammar as an instrument of torture upon the helpless schoolboy. To memorize it, as well as large parts of the gospels and epistles, was as

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necessary as to know by heart large portions of the classics. The methods of teaching became even more rigid, the discipline even more severe, the divorce from practical life in content of study even more pronounced. As a rule, the Protestant school of the seventeenth century was a place of gloom and even terror for childhood. The religious scholasticism differed from that of the thirteenth century in content but not in spirit.

B. THE CATHOLIC REACTION

The Council of Trent.—Luther's revolt accelerated the attempts at reform within the Catholic Church, which culminated in the Council of Trent (1545-1563). This council did a remarkable piece of work in eliminating the abuses which had given most offense, in carefully defining articles of faith with respect to which there had been any uncertainty, and in making regulations regarding education. The work of the Renaissance had been essentially a campaign of education against the prevailing ignorance. The Reformation leaders had relied upon education as the chief instrument to advance their cause. The old church determined to use the same instrument in its work of rejuvenescence. Several teaching congregations were founded, the most important of which was the Society of Jesus.

Origin of the Jesuit Order.—Ignatius Loyola (1491-1556), the founder of the Society of Jesus, was a Spanish nobleman who, while convalescing from a wound received in battle, was converted to a religious life by reading the lives of Christ and the saints. He determined to become a soldier of Christ, and in order to secure the necessary education spent eleven years in schools and universities, finally securing the master's degree at Paris.

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While at Paris he interested the six men who formed the nucleus of his order. In 1540 two of them accompanied him to Rome, where they secured the approval of the Pope for the organization of the society.

The principle of the Reformation had been the exaltation of the individual; that of the Jesuits was his suppression. The Reformation, tho it did not in fact adhere to the principle, had at least proclaimed the release of the individual from institutional control; the Jesuits demanded his complete subjection to institutional control. Loyola had been a soldier and he organized his society upon a military basis. Unquestioned obedience to authority was the fundamental doctrine. The constitution, which was prepared by Loyola himself, places at the head of the society a "general," who is elected for life, has immense powers, and who resides at Rome. The countries in which the society works are divided into provinces, at the head of each of which is a "provincial" appointed by the general. Each college in a province has at its head a rector, appointed by the general but responsible to the provincial. Responsible to the rector but appointed by the provincial are the prefects of study and of discipline, who supervise the work of professors and preceptors. The organization, like the Constitution of the United States, is one of checks and balances intended to make change difficult of attainment.

The "Ratio Studiorum."—The aim of the society is best expressed in its motto "Ad Majorem Dei Gloriam" (A. M. D. G.), i. e., everything to the greater glory of God. As the Church was God's chosen instrument, the motto meant, humanly speaking, everything to the greater glory of the Church. This was to be accomplished by three methods: preaching, teaching, and confessing. The order was organized to perform these func-

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tions primarily among the heathen and in Catholic countries, but in practice it not only accomplished its work in those places, but became the chief instrument of the Church in regaining lands and souls lost thru the Protestant Revolt. The constitution consists of ten parts, of which the longest is the one dealing with educational matters. In 1584 the general appointed a commission to organize a plan of work which, when completed, was to be submitted to the ablest teachers of the provinces. This commission studied the best educational systems of the times, Catholic and Protestant, and its work received the most careful revision as the result of the criticism of the teachers of the order. When the "Ratio Studiorum," i. e., the method of studies, was published in 1599, as an expansion of part four of the constitution, it embodied not only the best thought, but the results of forty years of experience in educational work. It provides in great detail for the administration of the college, the content of study, the methods of teaching, discipline, in fact, everything that has to do with education.

The Jesuit Colleges.—The Jesuits did not engage in elementary education, their purpose being to train leaders. Their colleges were divided into lower and upper colleges. The lower college gave a humanistic education similar to that given in the Protestant Gymnasium. The study of Latin from the narrow Ciceronian point of view formed the chief content, there being but little Greek. History, geography, science, and mathematics were given under the title "erudition," but only as necessary to understanding of the classical authors studied. Boys were admitted to the lower college at the age of ten to fourteen, and the course was usually six years. In the upper college, which corresponded to the existing university, the first three years were devoted to philosophy,

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with Aristotle as guide, and the last four to theology, with Thomas Aquinas as master. An additional two years could be elected by those intending to prepare a thesis for the doctor's degree. This organization of work remained practically without change until the suppression of the order in 1773. When the society was revived in 1814 the need of a new content was manifest, and the "Ratio Studiorum" was revised in 1832. Altho the classics continued to be the important element of the course in the lower colleges, provision was made for mathematics, the sciences, modern languages, and physical training. Since 1906 the "Ratio Studiorum" is not binding uniformly in regard to content and method of work, but each province is to decide upon the curriculum according to its peculiar needs.

The educational success of the society was almost instantaneous. The Jesuits were besought by bishops everywhere to open colleges in their dioceses. Within a century they had a practical monopoly of higher education in Catholic countries and had made great headway in Protestant countries wherever they were permitted to reside. When the society was suppressed in 1773 it had more than seven hundred institutions, two hundred thousand students, and twenty thousand members. From the very beginning the graduates of the Jesuit colleges occupied the highest positions in the Church, in the state, and in the professions; and the Jesuits were feared and hated by the Protestants as their most dangerous enemies. They chiefly were responsible for the reconquest of southern and western Germany to the Catholic faith and for its maintenance in France and in other countries.

Causes of Their Success.—The great success of the Jesuits was due to certain well-defined causes, among which were the following:

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1. *Their splendid organization*, which resulted in the education that they gave being thoro. This was true of certain of the Protestant Gymnasien, like Sturm's, but it was true of all the Jesuit colleges. Moreover, their organization made for uniformity. A Jesuit teaching at Lisbon in the seventeenth century might be transferred to a similar class at Cologne and continue the work there as if he were still teaching in Lisbon.

2. *Their gratuitous instruction*. Education was absolutely free to all. A good Protestant Gymnasium in debatable territory had to pay decent salaries to its excellent teachers, who might have families to support. This necessitated charging high fees. If a Jesuit college was established there, as usually happened, the advantage it had over its opponent is obvious. Even many Protestants would send their children to it.

3. *Their excellently trained teachers*. The Jesuits were always on the lookout for particularly able youths to become novices of the society. Before such a selected youth became a teacher in the lower college, he had to complete at least the course in philosophy in the upper college; and to teach in the upper college, he must have completed the course in theology. As early as 1565 the society caused to be established in each province one seminary for the training of teachers, which the future teacher attended two years. When teaching in the lower college he was under the careful supervision of the prefect of studies.

4. *Their methods of teaching*. These aimed at doing at any one time a small amount of work intensively and making sure it was well done and retained. It resulted in their emphasizing:

a. Oral Instruction. This was called the "prelection" and consisted in a lecture in the upper college and an

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explanation in the lower. A short passage of an author would receive a first explanation to obtain its general meaning; a second for its grammatical construction; a third for "erudition," i. e., to explain historical, geographical, or other allusions; a fourth explanation of its rhetorical elements; a fifth of any moral influence to be drawn; and a sixth, "a comparative study of the Latinity." It should be noted that the Jesuits wrote most of their own textbooks and used carefully expurgated editions of the classics.

b. Memorizing. The emphasis upon this is evident from what has been said of the "prelection." "Repetitio mater studiorum est" (Repetition is the mother of studies), was one of the mottoes of the society.

c. Reviews. Constant reviews attended their work. Each day began with a review of the work of the day before; each week ended with a review of the work of the week; and the last month of the year was given to a review of the work of the year.

5. *Their methods of discipline.* At a time when corporal punishment was the favorite method of securing good conduct and the chief stimulus to study, the Jesuits practically abolished it in their schools. It was used only as a last resort and never inflicted by a teacher. In its stead they used prizes and emulation. They carried emulation to such an extent that every pupil had his "rival," with whom he was to compete in lessons and in conduct. Often the boys were divided into sides and engaged in a "concertation," i. e., a debate upon some feature of the lesson in grammar or rhetoric; and the side that won would be given some prize or granted some privilege. Voluntary societies called "academies" existed in each college, to which the most virtuous and talented students were admitted, and in which orations, dec-

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lamations and debates were practiced. Dramatics, to train in speaking and acting, which were also a feature of the best Protestant schools, were much emphasized in the Jesuit schools. Games and physical training were encouraged for physical welfare.

Criticism of Jesuit Education.—To describe the conduct of work of a Jesuit school is to state its good side. Briefly the work was thoro, systematic, efficient. The teachers aimed to make school work pleasant and they succeeded. Without question they were the best teachers of the seventeenth century and continued to be so as long as the humanistic content of schools remained socially useful. But their system was so rigid that they were not so able to conform to new conditions as the Protestant school systems—which is saying very little. They were doing practically the same thing in the same way in 1773, when they were suppressed, that they had been doing a century and a half before, at the height of their influence. In the paucity of content, i. e., almost exclusive devotion to Latin, and in their formalism in method they erred in common with the Protestant schools. And their emphasis upon memory work at the expense of an appeal to the reason was characteristic of all Ciceronianism. But their excessive use of emulation must often have aroused bitter feeling; and their concertations and disputations must have appealed powerfully to the love of display.

The Jansenists of Port Royal.—Tho the Jesuits secured a practical monopoly of higher education in Catholic countries during the seventeenth century, this monopoly did not exist without opposition. The most important reaction against the Jesuit system was that of the Jansenists of Port Royal. These were followers of Bishop Jansen, a Dutch bishop whose studies of St.

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Augustine had led him to a statement of doctrines resembling those of Calvin. Tho his doctrines fell under the ban of the Church, his followers remained within the fold. A number of the most prominent and distinguished of these, under the leadership of the Abbé de St. Cyran, settled at Port Royal, near Versailles, to devote themselves to prayer and study. In addition to their religious devotions, manual labor, and works of charity, these solitaires engaged in educational labors which were marked by a number of distinct advances over the prevailing methods.

The "Little Schools" of Port Royal (1637-1660).—Despite their acceptance of the rationalistic philosophy of Descartes they held to the belief that human nature is essentially bad. The child left to his own inclinations and impulses tends to evil, hence he must be brought up in an atmosphere of piety and in constant association with his teacher. Only thus can the sole end of education be attained, viz., to develop the moral and religious character of the child. For this reason the "little schools" never numbered more than fifty pupils, usually not more than twenty-five; and a teacher seldom had charge of more than six pupils. These "Gentlemen of Port Royal" had associated with them a number of rare women who gave an education to girls similar to that received by the boys. Pupils were usually admitted to the schools at about ten and remained until sixteen or seventeen. The schools existed altogether but twenty-four years. The first was established at Port Royal in 1637, and all of them were suppressed in 1660 by Louis XIV, at the instigation of the Jesuits.

Educational Principles of the Jansenists.—The Port Royalists did not rise above the prevailing practice of overemphasizing the literary element in education. They

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neglected science and made no place for physical training. But they predicated as their fundamental principle that children should study only what they understand. From this principle certain practices naturally followed, among which were:

1. Instruction must begin with the vernacular, in the teaching of which they made a great advance by using phonic methods in reading instead of the prevailing alphabetic method.

2. Giving an introductory survey of classical literature by means of translations. After study of the Latin language was begun a wide selection of authors was made, to get the content of the classics; and only so much grammar as was necessary to an understanding of them.

3. Teaching mathematics as a good training for the understanding. This was followed by the study of logic.

4. Compiling new textbooks to carry out their idea of appealing to the reason instead of the memory. The "Port Royal Geometry" and the "Port Royal Logic" were used in schools long after the suppression of the "little schools."

5. Relying entirely upon the affection of the child and the zeal of the teacher as a method of discipline. The Port Royalists not only rejected corporal punishment but condemned the emulation of the Jesuits even more severely, as not consistent with the development of a moral and pious character.

The practices just described were distinct advances upon those in use at the time. It was a pity that they were made use of in an atmosphere of excessive piety which must have chilled a good deal of the natural spontaneity of childhood. The great influence exerted by the Port Royalists came not so much thru their school work as thru their activity after their suppression. They

produced many treatises on various aspects of education, which had a profound influence. When we mention the names of Pascal, La Fontaine, Rollin, and Racine as some of the many eminent Port Royalists, we can understand why their influence was so disproportionate to their numbers.

La Salle and the Christian Brothers.—The Jansenists, like the Jesuits, were primarily interested in secondary and higher education. As already stated, this was characteristic of the period of religious controversy. By the end of the seventeenth century the Protestants in Germany, Holland, and Scotland had organized systems of elementary education which gave a knowledge of the rudiments at least. In Catholic countries, tho desultory attempts at providing elementary education had been made, real progress dates from the foundation of the Institute of the Brethren of the Christian Schools by Jean Baptiste de la Salle in 1684.

The "Conduct of Schools."—La Salle had become deeply interested in the education of poor children in Rheims, where he was a canon of the cathedral. In 1684 he organized his Institute, which was to be devoted to the gratuitous teaching of the poor and to be composed of lay brethren, tho they were bound by the usual monastic vows. In order to attach his followers permanently to the education of the poor, La Salle forbade them to teach Latin. La Salle, like Pestalozzi, was inspired to educational reform by love of the poor. The schools at Rheims were so successful that the movement spread rapidly to Paris and other cities of France, tho because of opposition by interested parties it did not receive the Papal sanction until 1725, six years after La Salle's death. The "Conduct of Schools" is the "Ratio Studiorum" of the order. It was drawn up by La Salle

himself, and describes in minute detail the organization and management of the school, the content of work, the methods of teaching, and the discipline. It leaves no more to the initiative of the individual teacher than did the "Ratio Studiorum." This detailed prescription was necessary at a time when elementary teachers were without either knowledge or training; but it became a menace in the course of time.

Work of the Schools of the Christian Brothers.—The content of study in the schools of the Christian Brothers consisted of reading, writing, elementary arithmetic, and religion, of which the most important was religion. The atmosphere of the school was as deeply pious as that of a Jansenist school and had as repressive an influence upon the pupils. At a time when the chief characteristic of the ordinary elementary school was noise, the Christian Brothers went to the other extreme in enforcing silence. Written work was emphasized, signals used instead of commands, and corporal punishment freely inflicted as a form of discipline. But because of two great improvements the work of the schools was superior to that of other elementary schools. These were:

1. The training of teachers. The ordinary elementary school teacher of the seventeenth century was a broken-down soldier, church sexton, or poor artisan, who eked out his meager income by whatever he could get "keeping school." He usually had little intelligence, no training of any kind, and often a bad moral influence upon the children who went to him. Almost from the beginning La Salle organized training courses for teachers, and nobody was permitted to teach who had not attended one of them.

2. The class method of teaching. Everywhere at the time the method of teaching used in the elementary

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schools was individual instruction. In fact the teacher did practically no teaching, he simply heard children recite. In reading they sat in their seats and memorized as much as they could of the lesson and then repeated it individually to the teacher. In writing they imitated the copies set by the teacher until he was satisfied. In arithmetic they mechanically applied rules which they had memorized. Most of the time and effort was wasted. The Christian Brothers graded pupils into classes, according to their ability, and then provided all the children of a class with copies of the one book and a single teacher taught them simultaneously. Tho this great movement had already been suggested by Comenius, the Christian Brothers deserve the credit of applying it in practice on a large scale.

Success of the Christian Brothers.—These improved methods account for the rapid success of the schools of the Christian Brothers in France. When the order was suppressed during the French Revolution, the Brothers numbered nearly one thousand, in one hundred and twenty-five houses, and educated over thirty-six thousand pupils. Moreover, La Salle had established before his death boarding-schools, industrial schools, and reformatories (protectories), which also slowly increased. Since the restoration of the order in France in 1803 its schools have multiplied with astonishing rapidity over the entire world. The "Conduct of Schools" always admitted of easy revision, and the Christian Brothers in the nineteenth century have made their work conform to the needs of the districts in which they settled. Moreover they have engaged not only in elementary, but in secondary, collegiate, and even technical, commercial, and professional education. Nowhere have they been more successful than in the United States.

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The Education of Girls.—It has already been stated that the Protestant reformers extended to girls their demand that all should be taught to read the Bible. The Würtemberg plan adopted in 1559 provided for elementary schools for all children—boys and girls. Weimar made elementary education compulsory for all in 1619, and in 1642 Duke Ernest the Pious, of Gotha, established a comprehensive system of education which foreshadowed the German system of today. By it all children, boys and girls, were compelled to attend school daily from the fifth to the twelfth year and parents were fined for non-attendance of their children. Girls received some elementary education also in most of the other Protestant countries, England being the most notable exception. No provision of the same extent was made in Catholic countries. Girls continued to be sent to convents, and in 1535 the Ursulines were founded as an order whose primary purpose was the education of girls. The Port Royalists provided some educational opportunities for girls, but they were by no means equal to those which were provided for boys. The best book up to that time, and one of the best of any time, on the education of girls was Bishop Fénelon's "On the Education of Girls." Fénelon (1651-1715) had been placed in charge of the Convent of New Catholics, in which were taught girls converted from Protestantism after the revocation of the Edict of Nantes in 1685. While engaged in that work he wrote this treatise, which contains suggestions that were not only eminently practical, but founded upon a sound child psychology. It had very little influence, however, on the education of the day, which for girls as for boys continued to be repressive and dogmatic.

Decline of Interest in Education.—As stated, the division of Protestantism into rival sects quarreling over

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trivial points of doctrine and disputing upon abstract and speculative matters not susceptible of proof foisted upon higher education a new scholasticism which became as much the enemy of educational progress as the old had been. As practically the whole of men's thought and energy was given to religious controversy, little remained to be devoted to the investigation of the problems of nature and society. As a knowledge of Latin was considered by Catholics and Protestants a necessary preliminary to the study of theology, the formal study of the structural side of that language was made the chief work of the secondary school. The vernacular and the elementary school everywhere, among Catholics and Protestants alike, found very subordinate consideration. With the success of the Jesuits the bitterness between the adherents of the old and the new faiths increased and finally resulted in the Thirty Years' War. This was a most severe blow to education. Not only were schools by the hundreds ruined or closed and the resources necessary for their support destroyed, but enthusiasm for education itself waned. The period of the religious wars was essentially a period of educational stagnation.

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QUESTIONS, COMPARISONS, AND TOPICS FOR FURTHER STUDY

1. In what respect did the individualism of the Sophists in the fourth century B.C. differ from that of the Protestants in the sixteenth century A.D.

2. Compare the influence of the Bible as the chief reading matter of the people of the sixteenth century with that of the daily newspaper as the chief reading matter of the people today.

3. Compare the influence of Homer upon the Greeks with that of the Bible upon the English.

4. Had Luther's emphasis upon the performance of domestic work at home by children any relation to the modern movement in favor of industrial education?

5. Compare the organization and curriculum of the Protestant Gymnasium with those of the Jesuit college.

6. Why have the mass of the people of Scotland during the past two centuries been so much more intelligent than those of England?

7. In what respects did the work of St. Benedict and of Loyola resemble each other?

8. Arrange in the order of preference the following stimuli to study: corporal punishment, interest, desire to please parents and teachers, prizes, love of learning for its own sake, emulation.

9. Is the modern emphasis on dramatization as a method of development of self-expression the result of the Jesuits' practice in giving plays?

10. In what respects did the Port Royalist practice of

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teaching Latin from translations differ from the modern practice of using "ponies"?

11. Why did not the Renaissance, the Reformation, or the Counter Reformation have better results in the higher education of women?

12. State the arguments for and against giving religion a place in the public school curriculum. Does the Gary plan effect a compromise?

13. State the arguments for and against appropriation of public moneys for sectarian education.

CHAPTER X

REACTION AGAINST HUMANISM—REALISM IN EDUCATION

Outline.—Formalized humanism was constantly opposed by reformers who demanded that education deal with the realities of the present life and prepare for its concrete duties. These *realists* may be classified for purposes of study into the following groups:

1. Humanistic realists, who wished to secure a knowledge of human society and its institutions and of nature and man's reactions to nature chiefly thru a study of the classics for their content, not their form. Milton's "Tractate on Education" represents this view.

2. Social realists, who emphasized modern foreign languages and travel for intercourse with men, and social subjects like history and politics, rather than grammar and rhetoric. Montaigne, in two of his essays, "Pedantry" and "The Education of Children," represents this view.

3. Sense-realists, who demanded a new content and a new method in education, viz., the study of things, especially nature, and the inductive method. Francis Bacon in "The New Atlantis" foreshadows this view.

Comenius is the best representative of sense-realism. The principles which he advocated were set forth in his "Magna Didactica," which practically remained unnoticed. But he was successful in introducing some of them into his Latin texts, which were very popular.

Social realism had a direct influence upon the *Ritterakademie* in Germany, and humanistic realism and sense-realism upon the *academy* in England and America. The greatest

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influence of sense-realism was upon the pietists' schools, and it was finally incorporated in the *Realschule*.

Meaning of Realism in Education.—It cannot be too strongly emphasized that none of the movements described in the last chapter had any effect in diminishing the formalism into which humanistic education had fallen. Being all religious in nature, they intensified that formalism and added to it a respect for authority and tradition which was alien to the spirit of true humanism. But, altho institutional education tended strongly to suppress the free expression of individuality, the human spirit found vent outside of official schools and schoolmen. Narrow humanism held sway in education for nearly three centuries, but not without protest and opposition. In whatever respects its opponents differed they all agreed upon one fundamental principle, viz., that education should deal with the realities of the present life and prepare young men and women for its concrete duties. The prevailing education was one of books and words, not one of things and ideas. It exalted the pupil's memory and made him dependent, whereas he needed to have his judgment and reason developed in order to meet courageously the exigencies of a changing environment.

Classes of Realists.—What reforms were necessary in order to organize education as a preparation for actual living in contact with the realities of life? It is in the answer to this question that the realists differ. Some, like Rabelais and Milton, wished merely to hark back to the position of the early Renaissance scholars, viz., to study the classical literature for its content, not its form, to emphasize its literature, not its language. Realities to them meant ideas, and the best ideas ever conceived by

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the human mind were to be found in the classical literatures. These men have been called "humanistic realists." Others, like Montaigne and Locke, maintained that the only way to know the realities of life was by actual intercourse with men in society. Education, therefore, should be practical and aim to prepare the youth for social living. Modern foreign languages to enable him to travel and secure a wide experience should be emphasized instead of ancient languages; social subjects like history and politics to develop a sounder judgment, rather than grammar and rhetoric. These men have been called by Professor Monroe "social realists." A third group reacted against the prevailing education more violently than either of the others. They demanded a new content and a new method in education, viz., the study of things, especially of nature, and the inductive method. The only realities are things with which one comes into contact thru the senses. Men like Bacon and Comenius have generally been called "sense-realists," and with them we have the beginning of modern science.

It is to be noted that in studying realism in education we are studying men, not schools nor systems of schools. The prevailing methods of education were too deeply entrenched to be affected by the principles of these "innovators," as they were called. Most of them were not engaged in school work, but were writers. Their books or pamphlets against the prevailing education were often merely side issues in lives devoted to other affairs, tho their detachment enabled them to see its absurdities better than those engaged in its daily routine. Their principles had to wait for generations and in some cases for several centuries before they were realized. It is sometimes difficult to classify an innovator, because he partakes of the characteristics of more than one group;

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in fact he is placed in one group rather than another as a matter of emphasis.

A. HUMANISTIC REALISM

The ideal of the men of the early Renaissance was to reestablish Rome on earth. Being Italian they had a strong national pride in ancient Roman history. The humanistic realists wanted to understand human society and its institutions, nature and man's reactions to nature, so that the individual might be properly adjusted to the environment in which he was going to live. But this knowledge in the domain of thought and of action could be gained only thru a study of the classical literature. Whether one wished to study literature, philosophy, science, agriculture, architecture, or medicine, he must turn to the ancient authors upon those subjects. The education of the humanistic realist, therefore, was just as bookish as that which he opposed, but his was an intelligent use of books to get at their meaning, not primarily to study their structure and style. This was the view of the more thoughtful of those who believed that the classical languages and literatures were the sole means to an education. This was represented early in such works as the "Gargantua and Pantagruel" of Rabelais (1483-1553), it can probably be understood best by a brief study of a later representative, John Milton (1608-1674).

Milton's "Tractate on Education."—Milton's definition of education, "that which fits a man to perform justly, skilfully, and magnanimously all the offices, both private and public, of peace and war," sufficiently indicates his belief that education must prepare for actual living in a real world. To do this it must give a knowledge

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of the thoughts of the ancients upon the various activities in which men engage. Hence the years spent by boys in formal grammar, and later in acquiring elegant and showy information, are wasted. Milton, not satisfied that a student shall know the content of the classical literature, gives Hebrew, Chaldee, Syriac, and Italian a place in his curriculum. Moreover, he demands that practically all the natural and social sciences, applied mathematics, philosophy, in fact the whole gamut of learning be studied. But all these subjects are to be studied out of books and, moreover, out of books in foreign languages and chiefly in the classical tongues. Milton provides a curriculum fit only for little Miltons. He reacted not only against the content of the prevailing education, but also against its organization. He suggested that the entire education of a boy from twelve to twenty-one be given in an academy instead of being divided between the secondary school and the university. Great care is to be given to his moral and religious, as well as to his intellectual training, and a fine course of exercises is described for the boy's physical welfare. The scheme of education described in the "Tractate on Education" is purely ideal. It is of little service to the schoolmaster and had practically no influence. It has been mentioned to give an idea of the conception of education which the humanistic realists advocated.

B. SOCIAL REALISM

The social realists were men of affairs, interested in the proper education of the young aristocrat who would in all probability participate in public life. They were not likely to view with favor the prevailing education, characterized by so much pedantry and formalism, and

divorced from practical affairs. They had little sympathy even with the humanistic realists, who, they considered, aimed to prepare young men for the life of the past. Of all the realists they placed the greatest emphasis upon individualism. They preferred the education of the individual by a tutor to group training in schools. They had in view individual success as the aim to be sought and hence demanded a practical and utilitarian guide in the choice of subject matter and of method. They insisted that the training of the practical judgment, not the cramming of the memory, would best enable the individual to be efficient and successful in life. Only sufficient learning was necessary to assist in attaining these ends and to enable the individual wisely to enjoy his leisure hours. Above all, the education of the "man of the world" could best be secured thru travel, for by means of travel one is brought into direct contact with people and their activities, and that is the kind of experience which is most worth while. Of all the writers who held this point of view, the most representative was Michael de Montaigne (1533-1592).

Character of Montaigne.—Montaigné's own education was carefully supervised by his father. He was taught to speak Latin before French and was sent at an early age to the Collège de Guyenne at Bordeaux. This institution was one of the first fruits of the Renaissance movement in France and had maintained a fine reputation as a seat of humanistic learning. As Montaigne reacted unfavorably to the education given there, he naturally had little patience with what was done in the abodes of humanism generally. He afterwards studied law and held a number of public offices, being twice mayor of Bordeaux. But he early retired from public affairs and led a life of leisure, during which he wrote his celebrated

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“Essays.” Montaigne was essentially a skeptic and Epicurean, a man of worldly wisdom and tolerance; and tho his morality is essentially utilitarian and perhaps even materialistic, he is a most lovable figure in an age of bigotry, pedantry, and general intolerance.

His Educational Essays.—Montaigne wrote essays on a great variety of subjects, but his educational opinions are found chiefly in two, “Pedantry” and “The Education of Children”—especially in the latter. Holding the view that education is to prepare the individual for the practical affairs of real life, he has only scorn for the belief that the mere study of books will be adequate. Thereby the individual obtains a knowledge of words, not “things”—by which, like all social realists, he meant ideas. Ideas are gotten thru experience with others, therefore the boy must come in contact with others first in his own country, then by travel in other countries; and for the latter purpose he must study modern foreign languages. He should profit, moreover, by the experience of others; therefore Montaigne places great stress upon the study of history, which contains the experience of others, and should be taught as the philosophy of human conduct. In these ways a young man will accumulate real knowledge and wisdom, not merely information; and he will find discipline of the judgment, the mental power, of most value and use in life. How far better is this than the method then prevailing, of cramming the memory with mere verbiage! “To know by heart only,” says Montaigne, “is not to know at all.” “A boy should not so much memorize his lesson as practice it.” And all his learning should be done under pleasant conditions, not under terror, and with proper provision for the care and training of his body. It can be readily understood that an educational ideal so far

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removed from that which prevailed in his day would have little influence upon educational institutions. But upon the class for whom he wrote and upon succeeding thinkers, e. g., Locke and Rousseau, Montaigne's influence was undoubted.

Institutional Results of Social and Humanistic Realism.

—Tho the views of education expounded by humanistic and social realists had little influence upon the conduct of humanistic schools either in Protestant or Catholic countries, those views in conjunction with other influences did result in the founding of new institutions. Towards the close of the sixteenth century French court life began to have a profound influence upon the German nobility, and the desire to know the French language, literature, and ways of life spread rapidly. This, combined with the desire to have a more practical education that would prepare for civil and military affairs, led in Germany to the foundation of institutions known as *Ritterakademien*, i. e., schools for nobles. Physical training and accomplishments, modern languages, particularly French, political history and geography, mathematics, and military science, formed the main part of the work. Latin grammar, rhetoric, and religion were not wholly neglected, but they received only secondary consideration. After the Thirty Years' War there was a great extension of these institutions in Germany and, tho they were afterwards absorbed into the Gymnasium system, for nearly a century they were the most influential educational institutions in the country. Similar institutions were established by Richelieu in France, but they never had the same influence there as had the *Ritterakademien* in Germany.

The English Academy.—But it was in England that humanistic and social realism resulted in the most dis-

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tinctive institutions. When the Act of Uniformity was passed by Parliament in 1662, more than two thousand nonconformist clergymen were thrown out of their livings, and the universities and secondary schools were closed to dissenters. Some of these ministers of necessity, and others by choice, turned to teaching to support themselves; they found a large constituency in the children of the dissenters. Influenced in all probability by the description of the "Academy" in Milton's "Tractate," the schools established to meet the new need were given that name. Because the first necessity was the education of ministers for the nonconformist churches, Latin and Greek became the backbone of the curriculum; but modern languages were also taught and the medium of all instruction was English. Moreover, history, geography, mathematics, and natural philosophy had a place beside rhetoric, logic, and metaphysics. Despite the intensely religious atmosphere of these schools, their curricula and methods were determined by a purpose to make education a practical preparation for real living.

The Academy in America.—The academy eventually found its way into the American colonies. From almost the very beginning the humanistic grammar school in many seaport towns had added practical subjects to the curriculum. But it was not until the middle of the eighteenth century that an effort was made to break almost completely with the prevailing humanistic education by the establishment of an institution denominated an academy. In 1751 there was founded at Philadelphia, as the result of the suggestion of Benjamin Franklin, "The Academy and Charitable School of Pennsylvania," which later developed into the University of Pennsylvania. So desirous was Franklin of establishing a school that would

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prepare for life—especially for life in a new country—and not merely for college, that he at first wished to exclude all foreign languages from the curriculum. Tho this was not done, the emphasis was placed upon the teaching of history, geography, drawing, mathematics, the natural sciences, and English grammar and composition. In fact, Franklin's Academy was more the product of sense-realism than of either humanistic or social realism. Similar institutions were founded, especially in New England; and by the close of the century the academies were rapidly displacing the Latin grammar schools as the secondary schools of the country. We shall return to them later when discussing the development of education in the United States.

C. SENSE-REALISM

Scientific Discoveries in the Seventeenth Century.—One of the first fruits of the early Renaissance movement was the new attitude taken by men toward nature, the delight in its beauty, the joy of living in it, the desire to understand it. This interest in nature early had such results as the heliocentric theory of the solar system of Copernicus, the explanation of the motions of the planets by Kepler, and the discovery by Galileo of new celestial phenomena by means of the telescope he had invented. The wonder is that more rapid progress had not been made; but the explanation of that fact is given in the overshadowing place of religion in the life of the sixteenth century. Before the Reformation the Church was not friendly to the exposition of new ideas concerning nature that did not harmonize with Aristotle, and after it men's time and thought were given almost wholly to disputes over matters of religious belief.

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Nevertheless, in the seventeenth century such a remarkable series of discoveries in science was made as seriously to affect the ecclesiastical control of men's opinions in the domain of natural phenomena. To understand the immense advance made in the domain of natural science during the seventeenth century, one has but to enumerate Napier's logarithms, Descartes' analytical geometry, Newton's law of gravitation, Leibnitz' calculus, Torricelli's barometer, Boyle's theories of the vacuum and of gases, Harvey's theory of the circulation of the blood, Malpighi's use of the compound microscope. In fact, just as the fifteenth century brought with it a great literary revival and the sixteenth a great religious revival, so the seventeenth brought a great scientific revival. It was in reality the final stage of the Renaissance movement. These discoveries did not result from the reading of books, but from the deliberate application of men's powers of observation to the phenomena of nature. Moreover, some of them were in flat contradiction to the dicta of the Greek authorities who had been venerated for centuries. They were the fruit of the determination of men to think for themselves, to rely upon their own reason, and to use their own judgment. It can readily be understood that knowledge, and a method of securing it which widened men's mental horizon and resulted in real advancement of human welfare, would not lack advocates demanding for them places in the activities of the school. And tho this early scientific movement had very little influence upon the schools of the time, the educational writings in which it was set forth secured its very slow but gradual introduction into school practice.

Fundamental Principles of the Sense-Realists.—Like the earlier realists, whose views have already been de-

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scribed, the sense-realists condemned the following practices that then prevailed:

1. The excessive emphasis upon the literary element in education;
2. The cramming of the memory with material that was not understood;
3. The divorce of school work from the practical needs of daily life;
4. The harsh discipline, based upon the rod, which made the school a place of gloom and even of terror;
5. The neglect of the body and of the physical welfare of the individual.

But, in addition to opposing these wrong practices, the sense-realists advocated others which make their movement a far more important and emphatic reaction against the prevailing narrow humanism. Among them were the following:

1. That education should conform to nature, and that the laws upon which it should be based could be discovered in nature. They were not clear themselves as to what this implied; and they certainly had very little understanding of the development of the child mind.
2. That the proper order of procedure in teaching is things, ideas, words; and this meant that education is primarily a training in sense-perception thru contact with objective material.
3. That instruction, to be understood, must be in the vernacular tongue.
4. That an education based upon the perception of natural objects must have a new method, viz., the inductive method.
5. That by the proper application of this method and by the correct organization of material the quantity of knowledge to be absorbed by the individual was much

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to be increased. This led to an excessive emphasis upon the place and value of knowledge in life.

In the application of these principles—for they were nearly all applied in school work—the enthusiastic sense-realists often honored them more in the breach than in the observance, and gave ample opportunity for hostile criticism. But most of their principles—tho they knew it not—were in harmony with a sound child psychology and, therefore, were destined to be realized in the course of time.

Richard Mulcaster (1546-1611).—The man who provided a philosophic basis for what is known as the sense-realistic movement was undoubtedly Francis Bacon, and he is often referred to as the first sense-realist. But a number of writers who preceded him maintained the principles of the sense-realists in part and unconsciously advocated what he formulated into the method of induction. One of these, Richard Mulcaster, showed such remarkable prevision that his work demands a brief study. That he should have advocated the radical views he did is all the more remarkable when one remembers that he was successively the headmaster of the Merchant Taylors' School and of St. Paul's, two of the most famous humanistic schools of England. Yet in his two books, the "Elementarie" and the "Positions," he insisted that education should be according to nature, that is, should secure the expression of childish tendencies and not aim at their repression; that the first consideration in education is the care and training of the body; that elementary education is worthy of as much consideration as higher; that it should be for girls as well as boys; that the study of the vernacular is far more important than the study of Latin or of any other language; that teachers require university training as much as lawyers, physicians, or

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ministers. It is evident how much more radical are Mulcaster's positions than those of any other writer considered so far, and why some of them waited until the nineteenth century for fulfillment.

Francis Bacon (1561-1626).—Nevertheless, Mulcaster did not lay much stress upon what is the most distinguishing feature of the sense-realists, viz., that education must be based upon a training of the senses by means of the study of the objects and phenomena of nature. Neither did Bacon, who had comparatively little interest in education. But the revolution his work caused in men's ways of thinking inspired others who were interested in education to base their educational views upon principles he formulated. It is necessary, therefore, to consider those principles before studying their application to education by his followers.

"The New Atlantis."—Bacon had been carefully trained in the education of the day, but even while a student at Oxford he condemned the education he was receiving. He opposed scholasticism and humanism with equal vehemence, the one as dealing only with worthless speculation, the other with useless verbiage, and both as valueless for human welfare. Knowledge that cannot function for the advancement of the human race is not worth having. Bacon lived in the days of Utopias and he also wrote one, "The New Atlantis." This is a description of an ideal society, in which there dwell peace and contentment among the inhabitants. These ideal conditions resulted from an investigation of nature, the discovery of her laws and the harnessing of nature to man's needs and purposes by the invention of machines in conformity with her laws. The most important feature of "The New Atlantis" is "Solomon's House," a research institution given up exclusively to the scientific

investigation of natural phenomena. "The New Atlantis" is typical of what should exist among men in our own society; and "Solomon's House," of the kind of university needed for the realization of such an ideal.

The Baconian Method.—Knowledge of nature, then, is the only real and fruitful knowledge; but it cannot be obtained by the syllogistic reasoning of the schoolmen or by the use of the deductive logic, which was supposed to be Aristotle's sole method of reasoning. In the "Novum Organum" Bacon proposed a "new method," namely, induction, to supersede that given by Aristotle in the "Organon" (viz., deduction). As a matter of fact the method formulated by Bacon was neither a new method nor the true inductive method. He sneered at the "anticipation of nature" whereby an investigator frames an hypothesis to explain certain facts and then tests the validity of his hypothesis by comparison with other facts. Yet that use of scientific imagination was just what enabled the scientists mentioned in a previous paragraph to obtain their splendid results. Such results could never have been secured by Bacon's method, which can be briefly described thus: the investigator must first relieve himself of all "idols," i. e., prejudices; then assemble the materials resulting from his observations, and draw his general principle from a comparison of the cases where a certain effect took place and where it did not. Moreover, Bacon believed that *anybody* who followed his method would arrive at the true conclusion; no special mental power was needed. In fact, some of the realists were so enamored of the Baconian method that they maintained that by its proper use in education the individual would be enabled with comparative ease, and in much less time than was supposed possible, to obtain all the knowledge that was to be had (pansophia). De-

spite the fact that Bacon did not discover the true inductive method of reasoning and that he exaggerated the results to be obtained by the application of his own method, his eminent position in the social and political world and his ability to present his ideas attractively combined to give his writings an influence which went far to convince men that not reliance upon tradition nor the dicta of authorities, but careful observation and experimentation were what are necessary in order to arrive at an understanding of the truths of the natural and social worlds.

John Amos Comenius (1592-1670).—Bacon was interested in the subject matter of knowledge, not in how the individual acquires it. He did not concern himself with the psychological significance of the inductive method. If we get knowledge with certainty only by induction, it would seem to follow logically that we ought to teach inductively. But the educational application of his method Bacon left to his followers. While Comenius was not the first of these to attempt a realization of Baconian principles in teaching, he was the most influential and successful, and is by far the best representative of the sense-realistic movement. Comenius was not only the greatest educator of the seventeenth century, but one of the greatest educators of all centuries; and this is true whether we regard him as a practical teacher and administrator, a writer of textbooks, or a theorizer on educational principles. He was born in Moravia, studied for the ministry, and afterwards became the last bishop of the Moravian Church. Owing to the death of his parents when he was quite young, his early education was neglected, and he did not enter the Latin school until he was nearly seventeen, mature enough to understand the badness of the method used in teaching Latin. Come-

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nius' *first interest* in life was religious, and his strength and energy were largely given to caring for his persecuted coreligionists, who had been driven from their native land and were scattered everywhere thruout Protestant Europe. His religious work, however, brought him among men who were interested in education and who to some extent influenced his educational views. His *second interest* was philosophy, and this prompted him to attempt the complete organization of human knowledge into an encyclopedic form (pansophism). This had been done by some of the great schoolmen, but with Comenius it was to be based upon Baconian principles and to result from a study of the familiar facts and phenomena about one, which were to be arranged according to general laws. This done, the investigator could proceed to the unfamiliar and unknown, until he had covered the whole ground of knowledge, each part of which would find its natural place in the whole and lead inevitably to the next. The acquisition of this knowledge was for the purpose of functioning for social welfare and progress. Comenius' *third interest* was in the reform of education, and it was in this he achieved something of permanent value. In the history of education Comenius is really a transition figure from those who subordinated everything in education to religion to those like Locke and Rousseau, who considered religion merely one element in a secularized system.

The "Great Didactic" (1657).—Tho Comenius wrote a great many books and pamphlets on education, the principles which he advocates are best explained in his treatise on the philosophy of education, the "Great Didactic." This theoretical exposition of his beliefs he wrote in his early manhood, and his later school activities are but an application of the ideas set forth in it. The

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book consists of thirty-three chapters, covering the whole ground of education: its aim, purpose, proper organization, content of study, methods of teaching, discipline, textbooks. In fact, no topic of importance is omitted from consideration. It is a splendid summing up of the views of the realists, and is characterized by so much sanity and wisdom that it can be profitably studied by the student of education today. But the teachers of Comenius' generation were interested in the teaching of Latin; hence, while his Latin textbooks achieved an immense popularity, the "Great Didactic," one of the few really excellent treatises on education, received practically no recognition. It remained in oblivion until brought to light by the German educators of the mid-nineteenth century. Then it was discovered that many of the sound principles of education which had been adopted by the reformers of the late eighteenth and early nineteenth centuries had already been formulated by Comenius in the seventeenth. A very brief idea of the contents of the "Great Didactic" is given in the exposition of his views which follows:

The meaning, content, and method of education.—The religious aim of education dominated with Comenius. Education is to prepare the individual for eternal happiness with God by means of the acquisition of knowledge, virtue, and piety. In the exposition of this aim the pansophic fallacy of overemphasis upon the value and place of knowledge in human life is evident. Eternal happiness with God is the reward of right living, and that in turn is the result of knowing how to live in the world of nature and society. Hence the content of education must be primarily a knowledge of the facts and phenomena of nature. It is here that Comenius was most successful in carrying out Baconian principles, for he

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filled his textbooks with material from nature. He was too much of a theologian, however, to appreciate fully or to apply properly the inductive method. He states that we get knowledge by means of the senses, reason, and divine revelation; and even sometimes proves a contention by a quotation from Scripture. While he insists that teaching shall be "according to nature," he seldom means according to the method of experiment, but of analogy; and he constantly finds the clew for the teacher's method in the bird, the chick, the seed. But tho his psychology was defective, he was the first to apply the new method successfully to the practical problems of classroom teaching, and his textbooks owe their great success to the fact that they were written in accordance with it.

Organization of Education.—Comenius demanded that all persons, boys and girls, rich and poor, be educated not merely so that they might read the Bible, but that they might really develop as rational beings created in the image of God. This education of the individual was to be divided into four periods of six years each. (1) In the first of these the child should be taught in the *school of the mother's knee*, i. e., the home. During this period he should not only be cared for physically and morally, but should learn facts of nature and geography, without books. (2) The second period was that of the *vernacular school*, which was to be free and compulsory for all. The work of the school was to be conducted entirely in the vernacular tongue and to include material from all kinds of human experiences, so that not only religion and the three R's but history, geography, drawing, and mechanical arts should find a place. (3) The third period was that of the *Latin school*, the work of which was similar to that of the Gymnasium, but was to

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include, in addition to languages, science and the seven liberal arts. Because of the training given in the vernacular school and because of the better method of teaching languages adopted, the same ground could be covered in six years for which nine was needed in the Gymnasium. (4) The last period was devoted to the *university*, to which admission should be granted upon examination, so that only men of ability would attend. Provision should be made for every branch of human knowledge, so that a student would be enabled to study not only his profession but other subjects in which he might be interested. Beyond the university, which was to be a teaching institution, there should also be a "didactic college" devoted to scientific research. Comenius, therefore, provided an educational ladder which was in a way a suggestion of what has been worked out in America more than two centuries later.

Comenius' Latin Texts.—Comenius was known to his own generation as the man who had invented a new and better method of teaching Latin, and it was in his Latin textbooks that he was most successful in applying the principles of the sense-realists. He objected strongly to the way Latin was then taught, i. e., by beginning with grammar and using texts which had no natural interest for the child and made no attempt at grading the difficulty of the material presented. To overcome these obstacles he wrote the "*Janua Linguarum Reserata*" (The Gate of Languages Unlocked). The idea underlying this was to use the Latin names of common and familiar objects and arrange them into sentences increasing in difficulty, but arranged so as to give a clear knowledge of some topic. There were one hundred chapters of little more than a page each, covering a wide variety of subjects. The Latin was given on one side of the page and

the vernacular on the other, so that the child could get the Latin vocabulary by comparison and so that a knowledge of grammar could be developed inductively by the teacher. The two chief defects of the book were that he violated a fundamental principle of language teaching by using each word but once—there were eight thousand different Latin words in the “*Janua*”—and he indulged in his pansophic fallacy of crowding in too much knowledge. Nevertheless, the book was such a remarkable improvement upon any text then in use that in a short time it was translated into sixteen different languages and became the standard Latin primer in general use. Comenius was encouraged thereby to write several other textbooks, one of which must be briefly considered because of its immense popularity and its importance in the history of school textbooks. This was the “*Orbis Pictus*” (The World in Pictures), the first illustrated textbook for children. It was an adaptation of the “*Janua*,” but at the head of each chapter there was a picture to represent the text, each part of which was numbered to correspond to the words in the text. This was an attempt to introduce the principles of dealing with things by means of pictures, of arousing interest in the subject matter, and applying comparison and inference, the very basis of induction. The “*Orbis Pictus*” was even more popular than the “*Janua*,” and was used not only as the beginning text for the study of Latin, but also as a means of learning to read the vernacular. Comenius maintained that by the use of such textbooks and of the inductive method of teaching, the school would become a place of joy instead of gloom, and interest in work would supersede the rod as a means of discipline.

Influence of Comenius.—The Latin textbooks of Comenius continued to be thumbed by the boys of Europe



The Tailor, 1.
cutteth Cloth, 2. with Shears, 3.
and seweth it together with a
Needle and double Thread, 4.
Then he presseth the Seams
with a Pressing-iron, 5.
And thus he maketh
Coats, 6.
with Plaits, 7.
in which the Border, 8. is below,
with Laces, 9,
Cloaks, 10.
with a Cape, 11.
and Sleeve Coats, 12.
Doublets, 13.
with Buttons, 14.
and Cuffs, 15.
Breeches, 16.
sometimes with Ribbons, 17.
Stockings, 18.
Gloves, 19.

Sartor, 1.
discindit Pannum, 2. Forficis, 3.
confuitque Aca & Filo li-
cata, 4.
Postea complanat Saturas
Ferramento, 5.
Sicque conficit
Tunicas, 6.
Plicatas, 7.
in quibus infra est Fimbria, 8.
cum Infistis, 9.
Pallia, 10.
cum Patagio, 11.
& Togas Manicatas, 12.
Thoraces, 13.
cum Globulis, 14.
& Manicis, 15.
Caligas, 16.
aliquando cum Lemniscis, 17.
Tibialia, 18.
Chirothecas, 19.

Mur-

A PAGE FROM THE "ORBIS PICTUS" OF COMENIUS.

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long after his death, but except for that he had little influence on the schools of his own day and his name became almost forgotten. Humanism was too strongly intrenched to be ousted by realism. But altho his principles were not realized in practice, his writings indicate the turn in the tide from the control of religion in education to that of secular interests. No thinker in education after him will strike the religious as the dominant note. And with him the movement away from authority and toward freedom made a great advance.

Spread of Sense-Realism.—Tho the progress of sense-realism was slow it was nevertheless steady, and during the latter part of the seventeenth century the use of the vernacular in the elementary schools and the addition of some practical subjects to the curriculum kept apace. But the movement made greater headway in secondary education. This was due chiefly to the work of *Herman Francke* (1663-1727) and the pietists. After the Thirty Years' War formalism and intolerance among the religious sects of Germany increased, and intellectual adherence to a creed became even more than before the evidence of a religious life. Against this the pietistic movement was a reaction, as it was also against the rationalism that prevailed in the circles of the *Ritterakademie*. To realize one's religious belief in acts, and not merely to conform to the words of a creed, was the essence of the pietists' faith. Francke had been appointed in 1692, professor of Greek and Oriental languages at the recently established University of Halle. He was shocked at the ignorance and barbarism of the poor of the town and soon established a charity school for poor children. This was followed in succession by a secondary school for wealthy students, to which bright boys from the charity school were admitted, a seminary for the

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training of teachers, a printing establishment for the publication of books, as well as a number of philanthropic institutions, such as an orphan asylum, an apothecary shop and a free dining hall for poor students of the university. In the vernacular school, in addition to the elementary studies, history, geography, and natural history were taught; in the secondary school, in addition to the classics, French, history, geography, mathematics, drawing, and science, pure and applied. In other words there was being realized at Halle the Comenian ideal of a training in real subjects for practical life under religious influences. But whereas the real studies in Francke's "Pedagogium" (as he called his school) were in the nature of a relaxation from the classics, with his pupil *Johann Hecker* they became the very core of the *Realschule* which the latter established at Berlin in 1747. This was the mother of the *Realschulen* which were gradually established in the commercial cities of Germany, and which have since been incorporated into the secondary school system of Germany and are now on a par with the *Gymnasien* in the privilege of preparing students for the universities.

The University of Halle was the first modern university, and has continued to be one of the most progressive of the German universities. It was the first European university to substitute the vernacular for Latin as the language in which lectures were delivered. It rejected the narrow classical-theological scholasticism that prevailed in the other universities, introduced modern science and a liberal philosophy, and laid the basis for the "*Lehr- und Lernfreiheit*" (freedom of teaching and freedom of study) which afterwards became the pride of German higher education. Exalting the place of human reason in life, it gave a powerful impetus to indi-

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vidual freedom and a corresponding blow to the undue emphasis upon authority and tradition.

In England sense-realism had some influence in the newly established academies;¹ and this was also true of those that sprang up in America. It had comparatively little influence upon the universities. However, the mathematical and scientific work of *Sir Isaac Newton* (1669-1702), who held a professorship at Cambridge, gave that university a bias in favor of mathematics and science which resulted in the establishment of chairs for those subjects in the following century. In France and the Catholic countries generally, where the Jesuits were in control of secondary and higher education, sense-realism made little progress.

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QUESTIONS, COMPARISONS, AND TOPICS FOR FURTHER STUDY

1. Who approached more nearly the Greco-Roman ideal of education, Milton or Montaigne?

¹ See p. 163f.

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2. What value for educational purposes do you place upon the year of travel which is customary in Germany, known as *das Wanderjahr*?

3. In what respects does the aim of education today differ from that expressed by Milton in the "Tractate"?

4. Would it be possible today to train the "man of the world" with the culture material suggested by Montaigne?

5. What kind of memory training had Montaigne in view when he said "to know by heart only is not to know at all"?

6. What conditions in the American colonies worked for a cordial reception of realistic ideas?

7. What influences in England helped to stay the development of a more realistic education?

8. Is there a just balance in the education of today between the literary and scientific elements, between the thing and the word?

9. Give the reasons for the late introduction of the vernacular as the medium of instruction.

10. Whom in the early part of our study does Comenius resemble in his emphasis upon knowledge as necessary to right living?

11. Comenius wished to have elementary education completed at twelve. Could the work of our elementary schools be organized to end at that year and thereby leave the remaining two years for vocational work?

12. How did Comenius' method of teaching Latin differ from the Jansenists'?

13. Is the place of pictures overemphasized in the textbooks of today? What justification can you offer for the use of moving pictures?

14. To what extent may collections of post cards, pictures from magazines, and advertising matter be used for class teaching?

15. In what subjects, for what purposes, and to what extent would you use the stereopticon and moving pictures?

16. To what extent does *Lehr-und Lernfreiheit* exist among the institutions of higher education today?

CHAPTER XI

A NEW DEFENSE OF HUMANISM—FORMAL DISCIPLINE IN EDUCATION

Outline.—During the seventeenth century there was a steady decline in the utilitarian value of Latin, and another justification for it as the basis of the educational curriculum was needed by schoolmen.

This was found in the doctrine of formal discipline, which taught that certain subjects, particularly classics and mathematics, develop a general mental power that may be applied in any direction, and they should, therefore, be studied by everybody.

Toward the end of the eighteenth century a new humanism arose in Germany, which emphasized the value of the classical literatures, especially Greek, to develop the all-round man. The new humanism had little in common with the doctrine of formal discipline.

Decline in the Utilitarian Value of Latin.—The Renaissance scholars had only words of scorn for the formalism of the schoolmen, whose dialectic, they maintained, however well it may have sharpened wits, was empty of content for any of the needs of life. They turned joyfully to the classical literatures because those literatures contained materials of value to men in their thought life and in their activities, in politics, science, literature, and philosophy. But as the generations passed this became less and less true and Latin declined in practical value. It was retained as an official lan-

guage only by the Catholic branch of the Christian Church, it yielded to French as the language of diplomacy, it became less and less the vehicle for scientific discussion, its literature could not compete in interest with the rising vernacular literatures, and finally at the end of the seventeenth century it gave place to the vernacular as the language of university instruction. If it was to be retained as the basis of the educational curriculum, it must be justified upon some other ground.

The Doctrine of Formal Discipline.—A new justification was found in the theory of formal discipline. This theory is based upon Aristotle's "faculty" psychology, which considers the mind to be made up of certain "faculties," such as memory, reason, will, each of which needs special activities for its training and development. The theory of formal discipline maintained that the power developed in any faculty by the study of a school subject can be used equally well in any other subject or to meet any other experience in life; that just as the muscular strength developed by any physical exercise can be used for any purpose, so the power of memory or reason developed by exercise in any subject of study can render equal service in any other study or situation; that the classical languages, because of the orderly arrangement of their parts, and mathematics, because of the universality of its principles, are peculiarly well adapted to training all the powers of the mind—especially the two of most importance, the memory and the reason; that, therefore, it is unnecessary to teach other subjects in school because with the mental power obtained by the study of the classics and mathematics any other subject can be mastered with comparative ease; and that, finally, any student who cannot measure up to a discipline in these particular subjects is incapable of

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higher intellectual development or of meeting the demand of the more responsible positions in life. In a word, the theory of formal discipline maintained that it is not the thing learned, but how it is learned that is important in education. Formal discipline, therefore, came into direct conflict with realism, which insisted that the first function of education is to provide the individual with a knowledge content which will give him an intelligent understanding of the natural and social world of which he is a part and in which he will perform his life work.

Criticism of the Doctrine of Formal Discipline.—Psychology no longer holds that the mind is made up of a number of faculties, but that it functions as a unit, sometimes as thinking, sometimes as feeling, sometimes as doing, and that any mental experience, such as the study of a school subject, develops the whole mind, and not any faculty of it. In fact modern psychology affirms that there is no such faculty as the memory, but that the mind has “memories,” e. g., of time, place, things; and it denies that an ability to remember places is necessarily accompanied by an equal ability to remember faces and dates. The critics of formal discipline, moreover, deny the accuracy of the analogy between the development of physical strength and mental power. It is not true that the strength developed by any physical exercise can be turned equally well to any use. The strength of the piano-mover cannot compare in value to that of the oarsman in racing, nor is the strength of the oarsman of equal value to that of the piano-mover in moving pianos. Similarly it is not true that the power of reason developed in the study of mathematics will be of equal service in the study of languages or in business. On the contrary, its value in any other field will

be proportionate to the identity of content and procedure in that field. The conclusion of the critics of formal discipline is, therefore, that there is no transfer of general ability, but only a transfer of ability in proportion to the similarity of the two activities. Hence there is need in education of a broad and rich curriculum so that the specific powers developed by the different subjects and activities of the school can prepare the individual for the various situations and exigencies of life. More recent study of the problem has led to the belief that there is a transfer of "ideals" from one field to another; e. g., the ideals of accuracy, thoroughness and orderliness developed in the study of mathematics have an influence in setting up similar ideals in other subjects of study, which make the student disinclined to do work that does not measure up to those standards.

Influence of the Doctrine of Formal Discipline in Education.—For two centuries schoolmasters had been developing an elaborate technique for the teaching of the Latin and Greek languages. It was impossible that those subjects could be displaced by new subjects having no pedagogical technique, without arousing the utmost concern as to what might be the effect upon education. For a long time it was simply social inertia that kept the curriculum unchanged. Then men maintained that the established discipline in Latin and Greek had produced fine results: great minds had been fashioned by it. Finally, in their ignorance of a more analytical psychology, they developed the theory of formal discipline, which prevented their seeing the need of other subjects in the school curriculum. It is probably true that no educational theory has wielded a comparable influence upon educational practice. Down to the very end of the nineteenth century it was the accepted educational creed

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upon the part of the majority of persons engaged in elementary or higher education. This was true in every one of the great culture nations. The Germans borrowed the very word *gymnasium*, which with the Greeks meant a place for bodily discipline, to give to their chief educational institution which was to be a place for mental discipline. And it was not until the present Kaiser used his influence to that end that the *Realschule* was placed upon a par with the Gymnasium as a fitting-school for the university. In England the control that the doctrine of formal discipline maintained was still more rigid; down to the report of the Royal Commission of 1864 the six to nine years spent by an English boy in a public school were devoted to a great extent to Latin and Greek prose composition and versification, in addition to a wide reading in Latin and Greek literature. Even the advocates of realism and utilitarianism in education were influenced by the theory of formal discipline and placed their chief emphasis upon science in the curriculum, not because of its socially useful character, but because it developed a better general mental power than the classics. Tho a "modern side" was introduced in the great public schools and grammar schools of England as the result of the report of the Royal Commission in 1864, it is by no means equal to the classical side in the estimation of those who control the schools. In America the social conditions attendant upon the opening up of a new country necessitated the introduction of subjects of more direct or practical value into the schools, though formal discipline was held as a theory to the very end of the nineteenth century. The substitution of the academy for the Latin grammar school was a first step, and the introduction of the elective system in colleges and high schools a later step in the passing of its control. But

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it was only yesterday that spelling, grammar, and arithmetic, the formal subjects of the elementary school curriculum, were defended as the best possible "to train the mind"; and many teachers of the older generation still consider that some of the content subjects, such as nature study, with which the formal subjects have been compelled to share their time, are for this reason either of inferior value or mere fads.

The New Humanism.—It needs but slight reflection to perceive how deadly an influence the doctrine of formal discipline must have had upon the free expression of the human spirit. The student with a vivid imagination or a fine power of expressing ideas graphically or dramatically was regarded with little favor in a school where discipline was the sole aim of education. We are anticipating a little in speaking of the spirit of personality proclaimed by Goethe and Schiller, Lessing and Herder, in the latter part of the eighteenth century. Their belief in the moral mission of esthetic culture and of the need of incessant striving for higher activity had nothing in common with the educational theory of formal discipline. At the court of the Duke of Weimar and at the Universities of Göttingen, Jena, and elsewhere the new humanism that arose again emphasized the value of the classical literatures to develop the all-round man by infusing into his being the vitalizing spirit of classical culture. But the spirit and the substance of the ancient life as found in its literature, not the study of its languages as a discipline, became the aim. As Greek life and culture had more valuable lessons than Latin, the study of Greek language and literature superseded the Latin. The spiritual awakening in Germany with its longing for national unity and vitality which characterized the early nineteenth century was a partial product

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of this movement. It was lost in the reaction that followed the downfall of Napoleon. All the forces of conservatism in church and school welcomed the return of the theory of formal discipline in education as a bulwark of authority and tradition.

Bibliography and Questions at close of Chapter XII.

CHAPTER XII

RATIONALISM IN EDUCATION—JOHN LOCKE AND THE ENLIGHTENMENT

Outline.—After the religious wars of the seventeenth century almost every aspect of human life in Europe was characterized by the dominance of tradition and authority. The movement to attain to a rational freedom was initiated by John Locke, the founder of the school of empiricism in philosophy.

In education Locke has been classified as a realist, a naturalist, or a disciplinarian. While his views undoubtedly have elements in common with these schools, he makes the dominating aim in education the development of reason and the control of life by reason.

Locke is the starting point of the rationalistic movement known as the "Enlightenment," the chief characteristic of which was the determination to apply the test of reason to everything and reject outright whatever would not stand that test. The greatest influence of the Enlightenment was wielded on the continent under the influence of Voltaire.

Characteristics of the Early Eighteenth Century.—The latter part of the seventeenth and the early part of the eighteenth century were characterized by the dominance of tradition and authority in almost every aspect of human life. After the religious wars religion had settled down to a conformity to creeds and dogmas from which no divergence was permitted and which were destructive of true religious feeling and action. The higher intellectual life of the universities was characterized by

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a lack of independent thinking and was devoted to lectures in Latin on the theological-classical scholasticism which had superseded that of the medieval period. Political life was controlled chiefly by sovereigns and was based upon their "divine right" to rule. Social life discovered superstitions of all kinds, as, for instance, witchcraft. Social institutions, state, Church, and school, had combined to destroy the individualism that had been the first fruit of the Renaissance. A great force was needed to rouse men from idle acquiescence in mere assumptions and traditions and stimulate them to use their own minds upon real facts instead of words, and thereby release themselves from the weight of the past and attain to a rational freedom. This was the work of the English philosopher John Locke.

Career of John Locke (1632-1704).—Whether one considers Locke's writings in politics ("Treatises on Government"), on religion ("Letters on Toleration"), on philosophy ("Essay on the Human Understanding") or on education ("Thoughts on Education," "Conduct of the Understanding"), one finds him the great advocate of freedom and reasonableness and the opponent of traditional dogmas, political superstitions, and empty words divorced from things. His love of truth amounted almost to a passion, and with him the sole guide to the attainment of truth was reason. His philosophy was essentially the clearing up and systematizing of our common-sense beliefs, and has for that reason always made a strong appeal to the average intelligent layman.

Locke came of Puritan ancestry, which may account for his love of political liberty. He received the education which the average young Englishman of good family was given in that day, viz., a preparatory training at a great public school, in his case Westminster, fol-

lowed by a sojourn at one of the universities, in his case Oxford. At Oxford he was interested not only in philosophy, but also in physical science and medicine. He afterwards became physician and tutor in the family of the Earl of Shaftesbury, and shared the political fortunes of that great statesman, being compelled to follow him into exile in Holland in 1683 and to remain there until the Revolution of 1688. Upon his return to England he wrote his "Treatises on Government" to justify the Revolution and was rewarded with several sinecure political positions, which enabled him to devote himself to study and writing.

Difficulty of Classifying Locke.—Locke was well qualified to write on education. His medical studies, combined with the fact that nature had provided him with a frail physique, impressed upon him the importance of the physical well-being of the child. He was a distinguished psychologist, familiar with the phenomena of mental development. He was a man of the world, had traveled widely in western Europe and held important political positions. This made him competent, therefore, to evaluate human activities and to discuss the education best suited to meet their needs. Finally, he was a private tutor for a considerable number of years, and thereby had an opportunity to study the child's reactions to educational processes. His chief educational work, "Some Thoughts Concerning Education," was written at the request of a friend who was concerned over the bringing-up of his son. For a thoro understanding of his views, the "Thoughts" should be read in conjunction with his short essay, "The Conduct of the Understanding," a posthumous work on the development of the proper methods of reasoning. These two books were written without any purposed connection, and this fact, com-

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bined with Locke's versatility, permits writers on education to draw very different conclusions about his views.

By some he is classified with Montaigne as a social realist, and the facts that he confines himself to considering the education of a young gentleman, that he believes in tutorial training, that he insists upon a practical education for socially useful purposes, that therefore travel and such subjects as history and modern languages instead of Latin and Greek should make up the chief content of study, all make plausible such a classification. Other writers on education classify Locke with the sense-realists, and his insistence that the materials of all knowledge come thru the senses by contact with things, his abhorrence of learning by heart, his belief in pleasant methods of teaching and mild discipline give some cause for such a classification. Still other writers place Locke in the school of naturalists, and the facts that Rousseau, the great exponent of that school, admits his indebtedness to Locke, that both made physical education of primary importance, that both emphasized the natural curiosity of the child in his intellectual development, and that both believed in the theory of natural consequences in discipline offer some reasons for such a classification. Those who place Locke in any of the classes already mentioned draw their conclusions chiefly from a study of his "Thoughts." The most recent classification, which emphasizes rather the "Conduct of the Understanding," is to place him with those who hold to the disciplinary conception of education, tho no one who so classifies him maintains that he had anything in common with the rigid pedants of his day, who had divorced education from practical life and made it a matter of linguistic drill. They point out that Locke not only made physical education fundamental, but that he made it essentially

a hardening process, a matter of scanty clothes, hard beds, prescribed diet, open air and no coddling. They also show that, when treating of moral education, Locke makes character the end of education and states that that end is to be obtained by the formation of good habits thru a long discipline of the desires. They admit that in the "Thoughts," when treating of intellectual education, he devotes himself chiefly to the content of study, where he is in agreement with the realists. But they insist that Locke's true view of intellectual education is to be found in the "Conduct of the Understanding," where it is shown to consist in the formation of habits of thought thru discipline, particularly by the study of mathematics, and where he apparently professes a belief in the transfer of habits and power.

Locke's Psychology.—A study of Locke's psychology will show that, while each of these views of Locke is true, they are all partial and all subordinate to the dominating aim in education, the development of reason and the control of life by reason. Locke denied the existence of innate ideas and predicated the "blank-paper" theory of the mind, i. e., that the mind came into the world like a piece of blank paper. Just as no marks could appear on the paper unless they were put there from outside, so the materials for all ideas come to the mind thru the senses as the result of experience with the external world. The simple ideas thus formed are developed into higher forms of mental life by reflection, i. e., by reasoning. The aim of education is virtue, which is to be attained only when "man is able to deny himself his own desires, cross his own inclinations, and purely follow what reason directs as best, tho the appetite lean the other way." But in childhood the reason is undeveloped, and the basis of moral and intellectual education must be

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the formation of good habits—good habits of thinking as well as good habits of action. This can only be accomplished by repeating the action or mental power desired until it is acquired. “Would you have a man *reason* well, you must use him to it betimes, exercise his mind in observing the connection of ideas, and follow them in train. . . . We are born to be, if we please, *rational* creatures; but it is use and exercise only that make us so. . . .” The materials for this training are to be found in the “Thoughts,” the method in the “Conduct.” The training is not only to aim at reason as the goal, but is itself to be characterized by reasonableness: hence the importance of basing method with children upon the child’s natural activities, especially play, so that study may be made a recreation instead of a burden; hence the use of praise and commendation instead of flogging as an incentive to study; hence the objection to excessive religious instruction in early childhood and therefore the emphasis upon the secular aspect of education. The last recommendation in the “Thoughts” is directed to those who “dare venture to consult their own *reason* in the education of their children rather than rely upon old customs.”

Influence of Locke.—Locke had a decisive influence upon education on the continent thru the restatement of his ideas by Rousseau and their acceptance by German experimenters, such as Basedow. He is usually credited with having caused the emphasis on physical training characteristic of English secondary schools. His influence on the thought life of western Europe was even more profound, for he is the starting point of the rationalistic movement known as the Enlightenment.

The Enlightenment.—Ecclesiasticism, despite outbursts against its authority, remained in control of

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thought and life down into the eighteenth century. It was everywhere allied to institutions that had been outgrown but had retained their repressive control of the individual. The eighteenth century represents the final struggle of the individual to throw off the shackles of institutions, religious, political, and social, which restricted his intellectual freedom and denied his natural right as a man. The first half of the century was devoted to the struggle for freedom to think for oneself and to prove one's freedom by testing all things human and divine by one's own reason. This is the period of rationalism called the Enlightenment.

The movement began with John Locke in England, tho it had its greatest influence in France and Germany. Its chief characteristic was the determination to apply the test of reason to everything and reject outright whatever would not stand that test. As an overemphasis upon one aspect of mental life is likely to result in a neglect of others, the Enlightenment not merely neglected the whole feeling side of life, but viewed with scorn enthusiasm and vague intuitions as the enemy of clear ideas and definitions. As most of the institutions of the day had elements that could not stand the test of a severely accurate analysis by reason, the Enlightenment was essentially destructive in nature, and intentionally so. The rationalists were determined to free the human mind from the control of supernatural terrorism and of traditional beliefs in religion, and to liberate the individual from the legal injustices and political tyranny of the state. In England the movement resulted merely in skepticism, in religion, and the growth of deism. Deism rejects all revelation as irrational, and predicates a natural religion in which God acts in accord with unchangeable laws that have no special relation to man.

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The Enlightenment in France.—When the movement was brought to France by Voltaire (1694-1778), it had a very different history. In England the Revolution of 1688 had destroyed the political doctrine of divine right and had resulted in religious toleration. In France the Church exercised as strong a despotism over men's minds as the state did over their bodies. Against the obscurantism and intolerance of the Church especially, Voltaire waged a lifelong war. In this he was assisted by the "encyclopedists," as the brilliant circle of thinkers were called who were engaged in compiling the new encyclopedia which popularized English science and philosophy and embodied the knowledge that man had so far attained. It was a losing battle that dogmatists in Church and state fought against the cold reasoning, biting sarcasm and scientific knowledge of such men as Diderot, Montesquieu, Turgot, and Helvetius. It must not be thought, however, that the campaign waged by the rationalists against the outrageous abuses that existed in Church and state was an evidence of their devotion to the rights of man. The rationalists were essentially aristocrats. They wished to substitute for the worthless aristocracy of blood an able aristocracy of intellect. They would willingly have accepted an enlightened despot for France, such as Prussia had in Frederick the Great, Austria in Joseph II, or Russia in Catharine II. As the masses of men were not governed by reason, they and their woes had an academic interest for the rationalists; but the latter would have derided, quite as much as the aristocrats of the old régime, any participation of the masses in the control of social affairs.

Influence of the Enlightenment.—The social significance of the extreme individualism of the rationalists can

be readily discerned. Man in his upward progress developed institutions as the necessary expression of his own nature. He is only truly a man in so far as he participates in the life of those institutions, in so far as he is a father, neighbor, and citizen. To conceive him as a self-centered unit complete in himself without reference to social restrictions and complications is to conceive the anarchic society of the savage. Institutions must adjust themselves to new conditions in order that they may not repress the human spirit, but the adjustment must result from the action of the general reason, not of the purely individual reason. The rationalists repeated the mistake of the Greek Sophists. They destroyed the old moral sanctions based upon religion and custom, but provided no basis for a rational freedom. The result was inevitable, viz., to strengthen the influences working towards social dissolution.

For the individual to control his life by a coldly critical reason and to suppress all spontaneity of feeling means for him to set up the standard of a purely prudential morality and to formalize life. And this is exactly what happened in the circles of the upper classes in England and on the Continent, for they alone were affected by the rationalistic philosophy of life. The young gentleman was taught to be prudent in expressing his opinions, to exercise moderation in his passions, and to conform to the religious and social demands of an artificial society, however skeptical of them; above all to avoid all displays of naturalness as vulgar and irrational. While the Enlightenment did a tremendous human service in freeing the intellect from the bondage of dogmatism and traditionalism, it did little to destroy the formalism that controlled life everywhere in the eighteenth century. Idleness, artificiality, and the life of the draw-

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ing-room combined to make the dancing master the chief factor in the education of the unfortunate child of the aristocracy. To eradicate everything spontaneous and natural and to convert him into a miniature adult controlled by the formal and artificial code of the drawing-room was the dancing master's work. This is a fair statement of the characteristics of the aristocratic society in the eighteenth century; and when one remembers that the earlier revolts among the middle classes against religious formalism made by the English Puritans, French Jansenists, and German pietists had in their turn degenerated into a formal piety that was largely hypocritical or fanatical, one can readily understand the enthusiasm with which Rousseau's gospel of the return to the natural, simple, and emotional was received everywhere in Europe.

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QUESTIONS, COMPARISONS, AND TOPICS FOR FURTHER STUDY

1. What is the modern view of the "hardening process" in physical education maintained by Locke?

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2. Why was Locke's insistence that the materials of knowledge come thru the senses so long delayed in educational practice?

3. Does modern education place as much emphasis upon habit formation as the basis of character development as did Locke?

4. What is the modern view of the mind at birth? Does it have innate ideas? Is it like a blank paper?

5. Make a list of the various incentives to study used in education, and evaluate Locke's use of praise and commendation.

6. Has education since the Renaissance placed an undue emphasis upon the development of reason as the aim of school training?

7. Does the rationalists' low estimate of the value of the feelings and of the imagination account in any way for the small place occupied by the fine arts in education?

8. In what respects do the rationalists of the Enlightenment resemble the philosophers of Plato's "Republic"?

9. In what respects does the Enlightenment resemble the Renaissance?

PART IV

MODERN TIMES

Characteristics: The triumph of individualism. The predominance of secular interests in education. The development of national, state-supported and state-controlled systems of schools.

CHAPTER XIII

THE EMOTIONAL REACTION AGAINST FORMALISM IN LIFE—NATURALISM IN EDUCATION—JEAN JACQUES ROUSSEAU

Outline.—Rousseau was the great opponent of formalism and the great exponent of naturalism in life and education. He maintained that feeling, not reason, is the element common to all men, and was himself the exponent of his own beliefs.

Rousseau's social philosophy is expounded in his "Social Contract" which is a proclamation of the rights of man, and which inspired much of the writing and action of the French Revolution. His educational philosophy is expounded in the "Emile" which is a proclamation of the rights of the child and is the beginning of the "new education."

Natural education means giving the natural instincts, impulses, and feelings of the child unrestricted opportunity of expression. Hence it is a negative education, in which development results from experience, not from positive instruction. Intellectually, it means relying upon the natural curiosity of the child; morally, upon natural punishments.

The first attempt to realize Rousseau's teaching in school practice was undertaken by Basedow in Germany. His institution, the *Philanthropinum*, had as a keynote "everything according to nature." It anticipated some of the reforms with which Pestalozzi's name is usually associated, and initiated a liberalizing tendency in German education.

Rousseau and the Rationalists.—Rousseau was in many respects the child of the Enlightenment. The rationalists had made individualism the central fact of their

whole movement, and no one in history has emphasized the principle of individualism more than Rousseau. But in few other respects did Rousseau and the rationalists agree. He is the great apostle of the feelings in life. Feeling is the element common to all men, not reason. Control by reason leads to a cold, calculating selfishness, to a neglect of the common man. Control by feeling gives expression to the best in human nature and to love for one's fellow man. He was himself the exponent of his own beliefs. He was the slave of his feelings, instincts, and impulses and was a sentimentalist, if there ever was one. It was most natural that he should quarrel, in turn, with Voltaire and with Diderot. He reacted most violently, not only against aristocratic, but also against intellectual formalism; not only against the indifference and heartlessness of the aristocracy of birth, but also against the pretensions and narrowness of the aristocracy of intellect. With the rationalists he would do away with those institutions which the Middle Ages bequeathed, but which had been outlived and had become mere burdens. But unlike the rationalists he would do away also with all the petty conventions and artificial restrictions of society, and return to a simple and natural state wherein no one would desire to lord it over his fellows. The emphasis in modern life upon the place of feeling in literature, art, and religion can be traced to Rousseau.

Career of Rousseau (1712-1778).—Tho Rousseau gave voice to the hopes and aspirations which were stirring men's minds in his day, nevertheless his views on life and education were chiefly the result of his own personal experience. What those experiences were we learn chiefly from his "Confessions," in which he lays bare his own soul and discovers himself to be a remarkable

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mixture of the attractive and the repulsive, of what is fine and what is vile. His life falls naturally into three periods: (1) the period of preparation, 1712-1750; (2) the period of productivity, 1750-1765, in which almost all his works were written; (3) the period of decline, 1765-1778, when he was really semi-insane and led a wretchedly morbid existence. He was born at Geneva in 1712, of a dissolute father and a neurotic mother, and was brought up chiefly by a silly and sentimental aunt who fed his naturally vivid imagination upon trashy romances. His early education was very irregular, and during the four years he spent in trade apprenticeship to an engraver he learned, according to his own statements, more of lying, cheating, and shirking than he did of craftsmanship. The simple and earnest life of Geneva, however, left a deep impression upon his mind and afterwards furnished him with some of the materials for the ideal natural state of society which he proclaimed. At sixteen he ran away from Geneva and spent many years in a state of vagabondage, interspersed with desultory service in several wealthy families. These roving years provided him with the knowledge and love of nature afterwards shown in the "Emile," and with the knowledge and the hatred of the wretched conditions of the mass of the people which helped inspire the "Social Contract." He finally gravitated to Paris, where he lived with a stupid and illiterate girl of the lower class, earning their living in a variety of ways. During this period he showed a real interest and considerable ability in music. Finally, in 1750, the opportunity came to him to give expression to the views that had been germinating in his mind for many years. The Academy of Dijon offered a prize for the best essay on the subject: "Has the Progress of the Sciences and Arts Contributed to

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Corrupt or Purify Morals?" Rousseau wrote a brilliant essay which won the prize, perhaps more because of its fervor and literary style than of its logic. He maintained the thesis that the sciences and arts have been inimical to morals. The book made him famous, and his essay "On the Origin of Inequality Among Men," which he wrote three years later in competition for a second prize offered by the same Academy, tho it did not win the prize, was eagerly read. In 1759 he wrote his famous romance, "The New Héloïse," in which he emphasized the beauty of natural scenery and idealized romantic love and simple domestic life. The novel took Paris by storm and inspired its *grandes dames* to suckling their own infants, and residing in the country. It did more good, however, by preparing the public for the appearance of the "Social Contract" and the "Emile" in 1762. The one was considered anti-monarchical and the other anti-religious, and the "Emile" was publicly burned in both Catholic Paris and Protestant Geneva. Rousseau was compelled to leave France and find refuge successively in Switzerland, Prussia, and England. He was able to return to France, however, in 1770 and remain there until his death in 1778, finishing his "Confessions" and leading a half insane life.

Rousseau's Social Philosophy.—In the two prize essays Rousseau proclaims the ideal society to be that of the natural state, i. e., of primitive man, a state in which men are unequal physically and mentally because they are so by nature, but are not unequal socially and live in a condition of contentment and happiness. Thru the rise of private property social inequalities commenced, and the whole of history thenceforward is the story of the development of man from a condition of relative equality to one of absolute inequality. In the "So-

cial Contract" Rousseau adopts the theory already put forward by Hobbes and Locke, that civil society originated in a contract whereby men in return for security and certain other advantages gave up the unrestricted individual freedom which belongs to them by nature. This contract between the people and the rulers was solely for the general welfare, for civil society can only be justified by the advantages it brings to its members. Now, as a matter of fact, existing government protects the inequalities and social privileges that have grown up. Hence the contract no longer holds, and men should return to the natural state. But the natural state of the "Social Contract" is not that of the prize essays, but a society organized under the rule of the people, wherein the individual, tho controlled by the general will, retains his freedom and can develop his natural capacities unhampered. It is the exposition of these beliefs in the "Social Contract" that inspired our own Declaration of Independence and the Declaration of the Rights of Man in the French Revolution.

Rousseau's Educational Philosophy.—If the "Social Contract" is a proclamation of the rights of man, the "Emile" is a proclamation of the rights of the child. The child must be freed from the repressing customs and training that have been imposed upon him, just as the man must be emancipated from the perverted institutions that prevent his free action. We must educate the child "according to nature"; and to do so we must study his nature to find out whether there are any laws discoverable in him comparable to the laws governing physical phenomena. The "Emile" is really the first important treatise on child study. Hence when impressed by the inconsistencies and paradoxes that may be found in it, one must remember its pioneer character and the

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need felt by Rousseau of startling people into a knowledge of the absurdities and outrages of the prevailing education by using all the devices of the rhetorician.

The keynote of the philosophy of this revolutionary work, which is an educational treatise in the guise of a romance, is given in the opening sentence. "Everything is good as it comes from the hands of the Author of nature: but everything degenerates in the hands of man." Human nature, then, is good; there is no original sin; there is no total depravity as taught by the theologians. If the child is by nature good at birth, then the instincts, impulses, inclinations, and feelings of which he is made are good. Why should any restrictions be placed upon his free development? Why is not the best education a *negative education*, wherein no positive instruction is given in the subjects ordinarily foisted upon the child, but wherein his own individual nature, his own natural capacities, his own natural inclinations shall have free play? Negative education does not mean doing nothing. It means allowing the organs whereby knowledge is obtained to become perfected before the knowledge itself is presented. *Physically* negative education means freedom from restrictions on the child's natural activity, and the observance of all the good rules as to sleep, diet, air, and clothing which Locke had formulated and which Rousseau borrowed. *Intellectually* it means relying upon the natural curiosity of the child and upon an appeal to his interest, so that his senses shall have become sharpened and his judgment properly exercised for use at the age of twelve, when the child has enough surplus energy to undertake the acquisition of knowledge. *Morally* it means the discipline of consequences or "natural punishments." Nature's punishment for any infraction of her laws is never arbitrary, but always the inevitable conse-

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quence of the infraction itself. So the child should not be scolded nor whipped, but should be permitted to suffer the natural results of his own acts.

The principle of natural punishments has had such an influence upon subsequent writers on education that it is worth while to consider briefly wherein it is valuable and wherein impracticable. (1) It is of service in removing the human element in the problem of discipline. The child feels no resentment, as in the case of punishment inflicted by parent or teacher. (2) It is an excellent illustration of the principle of cause and effect, when the child is old enough to appreciate such a principle. (3) But it is unsatisfactory in that it is sometimes too severe and sometimes not severe enough. Overeating may result in permanent injury to the digestive system, whereas the natural result of lying, viz., not being believed even when one speaks the truth, is too remote to affect the child to any great extent. (4) It may punish others more than the child. To leave a child at home as the natural consequence of not being ready to catch the train for a picnic means for the parent or teacher to worry during the picnic about the child. (5) It would result in a merely prudential morality. The positive and finer virtues like unselfishness and magnanimity can never be developed by a consideration of consequences only.

We have still to consider one other implication in the opening sentence of the "Emile." If "everything degenerates in the hands of man," then society and its institutions, which are the results of man's work, must be bad, and it must be admitted that there was much in Rousseau's day to justify such a conclusion. The educational inference is that the child must be removed from such associations and brought to the country where, un-

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der the direction of a tutor, the principles of negative education enumerated above can be worked out in contact with nature alone.

Periods in the Development of the Child.—Rousseau revolted violently against the prevailing practice of treating children as miniature adults. He insisted that the child's life could be divided roughly into periods of growth, for each of which there were appropriate activities. The periods were as follows: from birth to five years, from five to twelve, from twelve to fifteen, from fifteen to twenty. To each of these periods he devotes a book of the "Emile," a fifth book being devoted to the education of girls, as typified by *Sophie*, whom Emile afterwards marries.

First Period (from Birth to Five Years).—The first book of the "Emile" is devoted chiefly to the exposition of the general principle which we have already discussed. But it treats also specifically of the training of the child to his fifth year. It must not be supposed that Rousseau's negative education means that the child is to have no supervision. The mother is to nurse her own child, and the father is to direct his training when training begins. The aim is to make of him a healthy little animal, and that is to be accomplished by letting nature alone. There is to be no forcing process, e. g., the child will learn to walk without any teaching. One must remove all restraint on his physical freedom, must let him play in the open country with only natural objects as his toys, and must attempt to teach him no ideas of right and wrong, for he cannot understand them.

Second Period (from Five to Twelve).—Physical development thru running, jumping, climbing, and swimming, intellectual development thru sensory and motor activities impelled by the child's curiosity, and moral

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development thru the discipline of consequences make up the life of the child during this period. His education is the very opposite of the one then prevalent. He is taught neither reading, writing, history nor literature. But he learns of his own accord to measure distances, to compare the weights of things, to draw objects, and to make his own inferences, as the result of his constant contact with objects and natural phenomena. Sense perception, motor activity, and intellectual development go hand in hand in the education of experience received by *Emile* under the supervision of the teacher, who is to guide but not teach.

Third Period (from Twelve to Fifteen).—During the years from twelve to fifteen, according to Rousseau, the child has more strength than he needs; hence this is the period which can best be devoted to the acquisition of knowledge. But the acquisition of knowledge is still to be determined by natural desires, i. e., by curiosity and interest. As not everything can be learned, only what is useful and comprehensible shall be attempted, and that means science. Science deals with the concrete and gives opportunity for training not merely in observation, but in investigation and inference. But it must be science as nature presents it, not in the logical order of the books: e. g., *Emile* learns geography from the topography of the country about his home, not from maps and globes which would give him misleading ideas. The only exception to Rousseau's opposition to books is "*Robinson Crusoe*," which is the first book that *Emile* reads, because it is a study of "life according to nature." It gives a knowledge of the natural needs of man and of the means for providing for them, and is a fine incentive to participation in manual work. *Emile*, in fact, learns during this period the trade of cabinet-making—for its

economic value in providing a livelihood, if necessary; for its social value in enhancing the dignity of labor; and for its educational value in developing skill and in keeping the body sufficiently exercised.

*Fourth Period (from Fifteen to Twenty).—*To fifteen *Emile* has been educated solely for himself and by himself, hence his education has been primarily physical. But at fifteen sex interests appear; and as sex interests form the basis of moral and social life, the education of this period is one of social relationships, of learning to live with one's fellows. Even this, however, is primarily an education of experience, not of instruction. *Emile* is brought by his tutor into natural contact with all kinds of men and situations, to learn thereby to do good and avoid evil. If the experience would be too dangerous, then the lesson can be learned from history. In this period also he is to receive his religious training. To this time he has not even known that there is a God, and he learns of the existence of God now thru his manifestation in nature. Natural as against revealed religion is the aim. To teach children religion is to impose upon them forms, ceremonies, and dogmas, which may result in their being good sectarians but will not make them reverence God or love their neighbor. Religion is a matter of the heart, not of the head; it is to be felt, not reasoned out.

The Education of Woman.—The fifth and last book of the "Emile" is devoted to the education of *Sophie*, whom *Emile* marries. Since woman is "by nature" different from man, there must be a corresponding difference in their education. But with Rousseau the difference is so pronounced as to make him contradict the fundamental principle of his philosophy of education, viz., that the education of each individual is to be determined by

the needs and rights of his own personality. Indeed, he uncovers a low view of womanhood. Woman has no individuality, her life is to be wholly supplementary to man's. She is to be physically trained in order to bear strong children; to be taught singing, dancing, embroidery, designing, in order to please men; to receive an early education in morals and religion in order to secure a good home life for her family. In other words, while Rousseau was a century ahead of his time in discussing the education of the boy, he varies but little from his time in considering the education of the girl. None of the great influence he had upon subsequent educators can be traced to what he says in his fifth book.

Estimate of the "Emile."—The education of the individual consists of the action of two factors: nature and nurture. One can no more say that one of these factors is more important than the other than he can say that the factor three is more important than the factor two in arriving at the product six. Education, from the time when the Renaissance degenerated into narrow humanism, had taken into consideration nurture only. The aim of school work was to produce the learned man, and the child was looked upon as a learning animal. The sooner he could be transformed thru nurture into the man, the sooner would education accomplish its work. This was best done by transferring to him the accumulated product of man's mental activity, especially literature. Hence the emphasis upon memory, hence the neglect of the thing for the word, hence the need of rigid discipline to accomplish what was necessarily a hard task. Against all this the "Emile" was a revolt to the other extreme, of making education a matter of nature only. There was to be no nurture, no training, no discipline, no instruction, only the unrestricted develop-

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ment of the powers with which nature endows the individual. In other words, in the "Emile" the child replaces the subject matter as the central fact in education. The work of the "Emile" was of necessity primarily destructive, and it performed a great service in clearing the ground of much educational rubbish preparatory to laying a new foundation. Altho the "Emile" provides an impossible scheme for educating the individual for social life, it is so full of suggestiveness concerning the aims, content, and processes of education as to be the starting point of the new education.

The New Education.—The education of the nineteenth century was characterized by three tendencies whose influence is still pervasive, viz., the psychological, the scientific, and the sociological. Education was considered to be essentially a matter of development from within, not of accretion from without. This development was to be based upon the native instincts and impulses of the child, which were no longer regarded as low-grade things. They and all the other natural forces and activities of the child had of necessity to be studied; hence the first influence of Rousseau upon education was to psychologize it, to direct it to child study. He knew little of psychology himself, but he had a deep sympathy with children and an intuitive knowledge of their nature; and his views, however distorted, became the inspiration of the work of Pestalozzi, Herbart, and Froebel. The second influence of Rousseau upon education resulted from his emphasis upon physical nature as providing its proper culture material. His opposition to books, and his insistence upon things as alone offering opportunity for the play of the child's curiosity, interest, and activity directed attention to nature study; and nature study is the A B C of science. The tendency dur-

ing the nineteenth century to give a larger and larger place to science in the content of education undoubtedly received its start from Rousseau. The third influence of Rousseau upon education, viz., to socialize it, seems almost a paradox. His solution of the problem of the reconciliation of individual liberty with social stability would result in social anarchy. But the impossible education for social living suggested by him in the fourth book of the "Emile" misled no educator who was inspired by his views. On the contrary those who best caught the true spirit of his teachings have all emphasized the social aspects of education. His intense sympathy for his fellow man, especially for the poor, his insistence upon the emotional as against the intellectual in education, his demand for the teaching of a trade, have all inspired movements that have had for their aim emphasis upon the democratic, moral, and industrial aspects of education.

Influence of the "Emile" upon Schools.—Upon the chief culture peoples of Europe Rousseau had a profound influence, but not always in the same way. He started the romantic movement in literature, with its emphasis upon the heroic and sentimental, its appreciation of natural scenery, and its interest in the life of the common people as against that of the court. And the romantic movement had a great influence upon the literatures of France, England, and Germany. His political and social theories were undoubtedly a contributing cause to the great revolution in France. They also had considerable influence in Germany and some slight influence in England. His educational views as portrayed in the "Emile" had no effect upon the prevailing education in France, for the "Emile" was anathema to both Church and state. They had no influence in Eng-

land, where they did not appeal to the practical common sense of the Englishman. The first attempt to realize Rousseau's teachings in school practice was made in Germany, the home of so many experiments in education.

Johann Bernard Basedow (1723-1790).—Despite the efforts of realists and pietists education in Germany continued to be dominated by ecclesiastical formalism during the eighteenth century. The catechism and the Latin grammar still reigned supreme, necessitating memorizing the uncomprehended in study; and harshness in discipline was universal. Children's activity and curiosity continued to be looked upon as evil tendencies, and school life was, therefore, a dismal and joyless affair. The publication of the "Emile" came as the breath of a new life to German students of education, and among the first to be affected was Basedow. He resembled Rousseau temperamentally, being irresponsible, immoral, and unstable; he hated the narrow-minded sectarianism which controlled German life and education, and he started a movement which resulted in a remarkable change. In the first part of his career he was engaged in a theological controversy with the orthodox party, which resulted in his being denied a teaching position in any public institution. He became a private tutor, and as such showed remarkable ability in correlating his pupils' play with work and their intellectual activities indoors with nature outdoors. Taking advantage of the great interest aroused by Rousseau's "Emile," he published in 1768 "An Address to Philanthropists and Men of Property on Schools and Studies and Their Influence on the Public Welfare." In this he made an appeal for money with which first to publish proper textbooks and secondly to organize a school according to the new ideas. The appeal contained two striking suggestions,

viz., that schools should be secularized, and that they should be nationalized. The response was most generous, the money coming from all classes and from all countries. It enabled Basedow in 1774 to issue his two books, "Das Elementarwerk" (The Elementary Work), and "Das Methodenbuch" (The Book of Method), both of which received a most enthusiastic reception. "The Elementary Work" was really the first reformed textbook that had been issued since Comenius published the "Orbis Pictus." It was, in fact, modeled upon the "Orbis Pictus," which Basedow had used with his private pupils. Its use was to result in a knowledge primarily of natural objects and phenomena, and it was accompanied by a book of illustrations. In the "Book of Method" Rousseau's method of learning by experience was advocated thruout, e. g., foreign languages were to be taught by the natural method, i. e., the conversational method instead of the grammatical.

The Philanthropinum.—Basedow was not content to publish his views in books; he wished to realize them in practice. With the generous assistance of the Prince of Dessau he opened at Dessau in 1774 an institution which he called the "Philanthropinum." As the name indicates, the love of mankind was to dominate and the children of the rich and poor were to be taught together. The keynote of the school was "everything according to nature." Rousseau's views were in constant evidence. The children were simply and loosely dressed, and physical exercises and games were provided for their bodily training. Nature study, chiefly by means of excursions in the neighborhood, and lessons from things and pictures to train the senses formed an important part of the work. All the teaching was in the vernacular and, altho Latin was retained for reasons of expediency, it, like

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French, was taught by the natural method. All were given instruction in handicrafts, but the children of the rich spent at them only two of the eight school hours daily and the children of the poor, six. The method of teaching arithmetic, geography, physics, and geometry had in each case the aim to make the work as practical as possible and to relate it as closely as possible to the interests and comprehension of the pupils.

Influence of the Philanthropic Movement.—Basedow had associated with him some excellent teachers, and his institution started out under the most favorable conditions. But his infirmities of temper and character were such that his best teachers found it impossible to work with him. Moreover, he was a great boaster and disappointed his supporters by the non-fulfillment of his extravagant promises. He was compelled within a few years to sever his connection with the Dessau institution, and under other men it survived only till 1793. But that institution was not by any means the finest exponent of the philanthropic movement. Christian Salzmann (1744-1811), who was probably the best of Basedow's associates at Dessau, opened at Schnepfenthal a Philanthropinum that was by far the most successful of the many imitations of Basedow's institution which sprang up all over Germany. It continues in prosperous existence to the present day. Salzmann's school undoubtedly anticipated successfully many of the reforms afterwards introduced into elementary education by Pestalozzi, and the philanthropic movement as a whole blazed the way for the changes with which the name of Pestalozzi is usually associated.

One other result of the philanthropic movement was the literature written for children by Basedow's associates. Some of these children's books were excellent, em-

bodying the new educational material in an attractive form, but many were filled with tedious moralizing and sermonizing in childish form. They inspired, however, the writing of the "Swiss Family Robinson" in the next generation, which is familiar to the children of every civilized land, and they were the direct ancestors of the splendid literature for children with which education is provided today.

The Naturalists and the Problem of Government and Liberty.—How do the naturalists solve the ever present problem of reconciling individual liberty and social stability? The rationalists had ignored the importance of institutional control. They had minimized the fact that the individual is born into society, and that society for its own preservation had developed institutions which are necessary to its growth and stability but which are restrictions upon the freedom of individual action. Rousseau and his adherents went further: Rousseau's whole philosophy of society and education was based upon the exaltation of the individual above society; the anti-social education of *Emile*, removed from social intercourse and control, aiming at development not only by himself, but only for himself, could but result in a social anarchist. The Reign of Terror was the natural product of Rousseau's teaching, and a period of reconstruction was necessary in society and education, under men better qualified than he to realize individuality in life without destroying social bonds. But never had social reliance upon the forces of mere authority and tradition received such a blow as that dealt by Rousseau. And that blow was a necessary preliminary to any sound reconstruction that would attempt to harmonize these two aspects of human life.

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QUESTIONS, COMPARISONS, AND TOPICS FOR FURTHER STUDY

1. Name five natural instincts of the child upon which education builds today. Of what use in the disciplining of pupils is a teacher's knowledge of the instincts of children? Illustrate.

2. Can the education of the average American school be profitably made more "negative" today?

3. To what extent can the school today build upon "the discipline of consequences"?

4. It is sometimes said that Montaigne, Locke, and Rousseau form a natural sequence. Point out wherein their views agree, and where they do not agree.

5. Did Rousseau's preaching result in more attention to the feelings in education? If so, how; if not, why not?

6. Was the education of *Emile* calculated to develop a strong will?

7. Was Rousseau justified in his emphasis upon country life as essential to the education of the child?

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8. Does Rousseau's denunciation of book work hold true in our education today?

9. We have many instances of the country boy seeking his fortune in the city and succeeding. Would that be the probable fate of a country boy educated like *Emile*?

10. Is education today founded upon the belief that men and women are "by nature" different?

11. What success has accompanied the introduction into our schools of the "natural" method of teaching languages?

12. Was the education of *Emile* a "cheat," as Davidson says, because *Emile* was unwittingly led into knowledge by his tutor?

13. Why did Rousseau, who built his education upon experience, give so little place to the experience of others as embodied in literature, history, institutions?

CHAPTER XIV

PSYCHOLOGIZING EDUCATION—THE METHODIZERS, PESTALOZZI, HERBART, FROEBEL

Outline.—The psychological movement was based upon child study and, as one result, elementary education became the chief concern of those engaged in either the theory or the practice of education. It led to better methods of teaching, better training of teachers, and a better understanding of the educational process. These results came from the work of a number of reformers, chief among whom were Pestalozzi, Herbart, and Froebel.

A. Pestalozzi. Pestalozzi's career falls naturally into three periods: (1) The period of experiment with industrial education at Neuhof. (2) The period of literary activity for social and educational reform, in which he published "Leonard and Gertrude" and "How Gertrude Teaches Her Children." (3) The period of reform in teaching elementary school subjects. This work he carried on at Burgdorf and Yverdon.

Pestalozzi considered sense-perception to be the real foundation of our knowledge, and observation the basis of all instruction. He aimed to analyze knowledge in each of the elementary subjects into its simplest elements and to proceed by a graduated series of exercises to what was more complex and difficult. While unscientific in his work, Pestalozzi initiated a movement which resulted in great changes in the aim, spirit, and methods of elementary education.

Pestalozzi never returned to the problem of combining industrial with intellectual education after the failure of the experiment at Neuhof; but his friend Fellenberg solved it with great success at Hofwyl, Switzerland, and his institutes were copied in many places in Europe and the United States.

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B. Herbart. Herbart makes character the end of education; it is to be secured by the development of a *many-sided interest*. Man's interests come from his experience with things and his intercourse with people; hence the need of scientific subjects and of historical subjects, the latter of which are the more important. The mind of the pupil is largely the result of the teacher's instruction, which—to be *educative*—should be based upon *apperception*, should follow certain *formal steps of the recitation*, and conform to the principle of *correlation* of subjects. Herbart's disciple, Ziller, developed the principle of correlation into the *culture-epoch* theory, and with others assisted in the spread of Herbartianism in Germany. Herbartianism has had a profound influence upon the content and methods of teaching in the United States.

C. Froebel. Froebel states the aim of education to be the *development of the inborn capacities and powers of the child*. *Self-activity* or *motor-expression* is the method of development, and *social participation* is the means of development. These principles Froebel attempted to realize in a new institution, the *kindergarten*, by using the materials known as *play-songs, gifts, and occupations*. The mysticism and symbolism which characterized Froebel's education retarded its expansion at first; but the most important streams of thought in present elementary education flow from Froebel; and his institution, the kindergarten, has spread thru Europe and the United States.

Characteristics of the Psychological Movement.—It has been seen that Rousseau struck a new note in education, in that he proclaimed that education was essentially a matter of the free and unrestricted development of the powers implanted in the individual by nature. It has also been seen that this view was a reaction against the prevailing disciplinary conception that the individual is by nature bad and must be fashioned into a different being thru human nurture. What was needed

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was a reconciliation of these two views—that education was a matter of human nurture, and that it was a matter of natural development—each of which contained elements of truth. This reconciliation was impossible so long as the idea prevailed that the mind was something distinct from the body, that it had somehow become lodged in it but was not of it. Such a view necessitated that all discussion of mental phenomena be metaphysical and speculative. But as the result of the start given by Rousseau the conviction of the intimate relation between mind and body gradually became accepted. This meant that mental phenomena could be understood not by means of metaphysical speculation but chiefly thru careful observation and experiment; and that education must be organized upon the results of such study. Pestalozzi, who had but a faint glimmer of the truth, groped towards it in a purely empirical way. Herbart is the turning point in the psychological movement, because, tho time and more precise knowledge have made it necessary to modify his conclusions, nevertheless he based them upon a scientific study of the mind. But the old conception of education was so thoroly intrenched in the school that the history of education in the nineteenth century is the story of the conflict between the place of nature and that of nurture in education, or, phrased in its later form, between the education “of interest” and the education “of effort.” It remained for John Dewey at the close of the century to indicate the basis of the hoped-for reconciliation. The psychological movement concerned itself primarily with the nature of the mind and its workings. Hence it brought about not so much changes in the subject matter of education, nor in its proper organization and administration (tho these were concomitants of the movement), but rather it led to bet-

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ter methods of teaching, better training of teachers, and a better understanding of the nature of the educational process. Moreover, because the movement was based upon child study, elementary education for the first time supplanted secondary education as the chief concern of those engaged in either the theory or the practice of education.

A. THE PESTALOZZIAN MOVEMENT

Career of Pestalozzi (1746-1827).—The first of the men inspired by Rousseau who attempted, as he himself expressed it, "to psychologize" education was Johann Heinrich Pestalozzi. It is probably more necessary to study his career than that of most educators, because his principles are the direct outgrowth of his experiences. He was born in the Swiss town of Zurich in 1746. Altho his mother was left a widow when he was but five years old, by her thrift and intelligence she was able to send him thru the vernacular and Latin schools and the university. The loving but well-regulated home life that characterized his childhood made a deep impression upon him and inspired him to make it the spirit that should dominate the schoolroom. Under the influence of his grandfather, the pastor of a neighboring town, he studied to be a minister, but was unsuccessful. He was much impressed by the wretched condition of the unfortunate peasants and afterwards studied law in order to become their champion. Upon the publication of the "Emile" and the "Social Contract," like so many of the young Swiss patriots he was inspired to revolutionary propaganda and came into conflict with the government. This first period of his life ended in 1769, when he married the beautiful and

intelligent daughter of a Zurich merchant, who from that moment until her death was his strongest support in time of trouble and discouragement. From the date of his marriage until his death in 1827 Pestalozzi's life falls naturally into three periods: (1) the period of experiment in industrial education for juvenile delinquents (1774-1780); (2) the period of literary activity for social and educational reform (1780-1798); (3) the period of reform in the teaching of elementary school subjects (1798-1827).

1. *The Neuhof Experiment*.—When Pestalozzi was married in 1769, he bought a farm which he called Neuhof; and in 1774 he determined to attempt to realize upon it one of the important principles of the naturalists, viz., that the character of the individual is shaped by environment and that the character will be good in proportion to the extent that the environment is natural. Pestalozzi had already written his "Journal of a Father," which was the result of his experiment in attempting to bring up his young son according to the principles of Rousseau. He had discovered that those principles would need much modification in practice and rightly concluded that the most natural environment for a child was a home dominated by the spirit of strict but loving discipline. He determined, therefore, to take in some twenty vagrant children of both sexes and so organize their daily life that they could support themselves by industrial work while receiving an elementary education in reading, writing, and ciphering and while living under the best moral and religious influences of a good home. The boys learned practical farm work and the girls household work, and both were taught spinning and weaving. Tho there was no direct relation between the industrial work and the formal instruction, the ex-

periment was a great success in showing the inspiring influence of properly organized manual work as a supplement to formal instruction. The improvement in the mental, moral, and physical condition of the children was remarkable. It encouraged Pestalozzi to increase the number of children until there were eighty, too many for either his executive or his financial ability, even tho he had the assistance of friends. In 1780 the experiment had to be given up because of the bankruptcy of the reformer.

2. *The Period of Literary Activity.*—The next eighteen years of Pestalozzi's life were devoted chiefly to literary work in the cause of social and educational reform, and incidentally for the support of his family. He was naturally much interested in the French Revolution, and tho at first fearful of its influence upon Switzerland, he eventually became a strong propagandist for the revolutionary principles, writing many pamphlets with the idea, usually, of educational reform as the necessary precursor of social reform. Early in this period, in 1781, he wrote the most famous of his books, "*Leonard and Gertrude.*" Like Rousseau's "*Emile,*" the book was written in the form of a novel to teach a great lesson in social and educational reform. It describes the degraded condition of the peasantry of Bonnal, a fictitious village of Switzerland, which is gradually transformed thru the influence of a peasant woman, *Gertrude*. By her devotion and skill she succeeds in reforming her drunken husband *Leonard*, in educating her children, in inspiring her neighbors by her example, and in attracting the attention of the authorities to her reforming work, until they are convinced that it is the way whereby the country as a whole can be redeemed. As a "book for people" it failed, since the great mass of them could not read;

but it was enthusiastically received by the intelligent public of Europe, ready at that time for any suggestion for social reform. Pestalozzi, however, was convinced that the public read the book merely as a novel and missed its educational significance. He accordingly wrote several continuations of it to give in greater detail his educational ideas, but the additions never interested the public in the same way as the original.

3. *Pestalozzi's Experiments in Elementary School Methods.*—a. Stanz.—In 1798 a complete change took place in Pestalozzi's career; from theorizing about educational reform he took to practicing it. In that year the French troops massacred the inhabitants of Stanz, and the government asked Pestalozzi to establish an institution in an old convent to care for the orphans left destitute by the massacre. Pestalozzi started out with the idea which he had attempted to realize at Neu-hof, viz., to establish an industrial school for poor children in which the emphasis would be placed upon the manual work, with a few additional hours of formal teaching. But difficulties arose on every side. The winter was most severe, and there was no equipment to carry on the practical work in industry. The emphasis of necessity was shifted to the work of instruction, but there were neither books, equipment, nor assistants. Pestalozzi, therefore, devoted most of his attention to oral teaching in number and language work by means of objects, and in geography and nature study by means of conversations. The change for the better in the eighty children committed to his care was remarkable; but the experiment was brought to an end in six months by the return of the French troops, who demanded the convent for military purposes. This was fortunate for Pestalozzi, for his health was almost ruined by his incessant labors.

The half-year at Stanz marks the transition from his interest in industrial education to the work of reforming the methods of teaching the ordinary subjects of the elementary school.

b. Burgdorf (1799-1804).—After the recovery of his health, Pestalozzi spent five years at Burgdorf, where he did the finest and most original work in reforming elementary education. At first he was engaged in the village school as assistant to the shoemaker who was the head teacher, but he lost his position because of his new methods. Fortunately, Pestalozzi's friends secured for him the use of part of the old Burgdorf castle and its garden. There he associated with himself five or six splendid teachers, who remained his devoted adherents. He took a considerable number of boarding pupils, as well as day scholars, and maintained an institute for the training of teachers, for all of which he received some governmental support in addition to voluntary subscriptions. It was during these years that he worked out the significance of the use of objects in the teaching of language, geography, and elementary arithmetic and science. In 1801 he published his most important pedagogical work, "How Gertrude Teaches Her Children," which is not, as might seem, a continuation of the career of *Gertrude*, who is not mentioned in it; it consists of a number of letters to a friend, describing his educational principles. The school at Burgdorf aroused intense interest among philanthropists and educators; but in 1805 the government needed the building for official purposes, and Pestalozzi was compelled to move.

c. Yverdon (1805-1825).—The Institute at Yverdon carried on for twenty years the experimental work begun at Burgdorf and was even more famous than the latter, being visited by teachers and laymen from all

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over Europe. Observational work upon concrete materials was made the basis of the simplification of methods in all the elementary subjects. Textbooks were compiled and teachers trained to spread Pestalozzi's methods in the chief European countries, and governmental agents and committees made investigations with a view to official approval or disapproval. The best work at Yverdon was done during the first five years; after that dissensions arose among the assistants, efficiency diminished, support was gradually withdrawn, and the Institute was finally closed in 1825. Pestalozzi withdrew to his old home at Neuhof, where he died two years later.

Influence of Pestalozzi on Education.—Until comparatively recently it was common to overestimate the importance of Pestalozzi in the history of educational development by attributing to him the entire reform movement of the early nineteenth century. His own work was characterized by some absurdities, such as the practice of memorizing long lists of words in language work, which was wholly inconsistent with his fundamental principle of basing all teaching upon sense-perception. Moreover, many of the best ideas and methods usually ascribed to him were the result of the work of his able and devoted associates. But when all his deficiencies are admitted, the impartial student must conclude that he is the starting point of modern pedagogy, in that he substituted experimentation for tradition in classroom practice.

1. *On the Aim of Education.*—Pestalozzi held with many of the other innovators that the purpose of education was to bring about a reformed society characterized by virtue in the individual and justice in the state. But unlike most of the preceding reformers he maintained that this could only be accomplished when every individual, however poor and humble, had been properly

educated. His advocacy of universal education had no ulterior motive, as was the case with the religious reformers, but was due to his belief that it was the right of every child. The evolution of the masses from their wretched condition would be secured only when the education of each individual consisted in "the natural, progressive, and harmonious development of all his powers and faculties." This could not be accomplished by the prevailing system, wherein the chief aim was the mechanical memorizing of forms without the understanding of content. On the contrary, the natural development of the mind demanded new methods and new materials of instruction, and it was in this connection that Pestalozzi made his greatest contribution to educational reform.

2. *On the Content and Methods of Teaching.*—(a) The Object Lesson and Oral Instruction.—The reason why Pestalozzi was so bitterly opposed to the prevailing education of his day was that he considered sense-perception to be the real foundation of our knowledge, and observation the basis of all instruction. Hence his emphasis upon the object lesson and oral teaching, which were the methods by which he tried to carry out the principles of Rousseau. Pestalozzi insisted that the prevailing method of studying the book and reproducing it filled the child's mind with either hazy ideas or mere words, whereas teaching thru observation of objective material within the child's experience gave him clear ideas and trained him in oral expression: not to gain knowledge of the object studied, as with Comenius, but to train the powers of the mind, of expression as well as of impression, was the aim. Incidentally the object lesson might transform the teacher from a passive hearer of recitations to an active agent in the mental development of the child, thru

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questioning and thru properly organizing the materials of instruction. With Pestalozzi the object lesson was informal, and only ordinary objects within the child's experience were used for the purpose. Some of his successors, however, so systematized object teaching as to make it very formal and, in the hands of an unenthusiastic teacher, wholly lifeless. This systematic object teaching was the bridge to the elementary science that became an integral part of the school curriculum in the later nineteenth century; this, in turn, in the twentieth century yielded to nature study, which subordinates scientific classification to a study of natural objects having an intrinsic interest for the child, apart from their relation to organized science.

(b) From the Simple to the Complex.—In using objective materials in each subject to develop sense-perception and oral expression, Pestalozzi tried to analyze knowledge in that subject into its simplest elements and to proceed by a graduated series of exercises to what was more complex and difficult.

Arithmetic up to his time had consisted in "ciphering" according to the most mechanical methods. Pestalozzi did away with this by postponing all written work until the child had made considerable progress in the subject, and he substituted mental or oral arithmetic for it. Moreover, to make sure that the child was getting real ideas of number instead of mere words, all the elementary arithmetical combinations were learned as the result of combining and separating objects, lines, and dots, instead of being merely memorized.

Geography had a place in the curriculum of few schools previous to Pestalozzi; and when it had, its study consisted chiefly in the memorizing of bare facts. Tho Pestalozzi himself was not without fault in this respect, he

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aimed at beginning with home geography, so as to show the influence of physiographic conditions upon human activities and development. The school yard, the village, the valley of the neighboring river furnished the necessary knowledge for the understanding of the map upon which they were placed after personal observation. From these simple beginnings the child was to be led, at least in theory, to a knowledge of the entire earth and its relation to man.

Pestalozzi made a great advance in teaching children to speak, i. e., in developing oral composition by having the children express their observations of objects, designs, and actions. But in the desire to make use of his principle "from the simple to the complex," he often made the work very formal and stereotyped. The basis of his teaching of reading was the "syllabaries," such as ab, eb, ib, ob, ub, etc.; the children were drilled in all the possible combinations of vowels and consonants before they proceeded to study words and sentences. It was a synthetic method, which violated the principle of going from the known to the unknown, i. e., from the sentence, which the children already used, to the letter, which was an arbitrary symbol.

In accordance with his principle of reducing everything to its lowest terms, to the "A B C of observation," Pestalozzi refused to have children copy designs or even draw from the model. Drawing, to which great attention was paid, was to consist first in learning the simple elements of form, viz., lines, angles, and curves, and then by many exercises in combinations to make the various geometrical figures and original designs. Writing was taught as a form of drawing, the letters being analyzed into their various elements, the straight line, the curved line, the slanting line, etc., much drill being

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given upon these elements before the child proceeded to write the letters themselves or words and sentences.

Pestalozzi's general principle of method was to organize an alphabet of every subject and then proceed by carefully graded exercises, each of which was to be thoroughly mastered before going to the next, to a good understanding of the whole subject. Tho this sound general principle was frequently overdone in practice, it was a great advance on the method it superseded of beginning with memorizing the rules, forms, and relations upon which the subject was based. Tremendous strides have been made in the arrangement of textbooks in language work, geography, arithmetic, and the elementary subjects generally since Pestalozzi's day, and these improvements undoubtedly received their inspiration from his efforts.

3. *On the Spirit that Should Pervade the School-room.*—Many of Pestalozzi's ideas had been anticipated by previous educators, and some of his practices were inconsistent with his theories; but in one respect he was almost unique, viz., in his demonstration of the fact that the only right relation between pupil and teacher was one based on love and sympathy. To understand this properly one must remember the kind of place the elementary schoolroom of the day was. When there was a school building, it was usually poorly built, unsanitary, and badly equipped. Often the school was "kept" in the home of the teacher, the teacher even being selected, sometimes, because he had a better room than his competitors. Without knowledge or experience, and receiving wretched pay, is it any wonder that the average teacher considered his work to be that of compelling the child to learn by rote his letters, his numbers, and his catechism, and that he sat with ferule in hand as an

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incentive to study and good behavior? The schoolroom was a place of terror; Pestalozzi changed it to a place of joy. The importance of respecting the individuality of the child naturally followed from the principle that education should aim at mental development, not at memorizing rules and facts; and it brought as a result in practice a friendly and trusting attitude toward the teacher upon the part of the pupil. Pestalozzi never forgot the loving spirit of his childhood home, and one of his chief purposes was to have the schoolroom approximate as nearly as possible to the conditions of the home. Certainly in basing his own discipline upon the principle of love he secured marvelous results. Unfortunately not all the schoolrooms of our own day are governed by his spirit.

4. *On Industrial Education.*—It will be remembered that, beginning with his work at Stanz in 1798, Pestalozzi devoted himself exclusively to reforming the methods of teaching the elementary subjects and never returned to his earlier work at Neuhof, which had for its aim the organization of industrial education for juvenile reform. But he had interested another man, Emanuel von Fellenberg (1771-1844), who was destined to carry out Pestalozzi's idea in one of the most remarkable educational experiments of the nineteenth century. Fellenberg came of noble and wealthy parentage and was wholly imbued with Pestalozzi's thought that the wretched condition of the Swiss peasantry could be improved only by means of a new education. When Pestalozzi was compelled to give up his school at Burgdorf in 1804, he formed a partnership with Fellenberg and they established a school at Münchenbuchsee. But Fellenberg was essentially a practical administrator, and Pestalozzi could not endure his businesslike organization. They separated with mutual

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good will, Pestalozzi establishing his school at Yverdon and Fellenberg establishing his "Institute" at Hofwyl, near Berne, where from 1806 to 1844 he developed his ideas in industrial education.

Fellenberg's Schools at Hofwyl.—Fellenberg aimed to do three things at Hofwyl: (1) To carry out the Pestalozzian idea of giving to the children of the poor an industrial education and at the same time the elements of an intellectual education. (2) To realize the *philanthropic* idea of educating the children of the rich and of the poor together, in order to develop a mutual sympathy and understanding. (3) To train teachers for the common schools, especially in the rural districts. Fellenberg was a most efficient organizer and established the various parts of his plan gradually, never undertaking a new element until he had demonstrated the success of the one previously attempted.

His fundamental idea was to meet the industrial needs of the mass of the people, which were chiefly agricultural; hence the first institution established at Hofwyl was an *agricultural school*, where the children of the peasants were taught on his estate of six hundred acres primarily the principles of intelligent farming and their practical application. As the education was intensely practical, workshops to train mechanics in all the needs of farm life were established. From the beginning he invited the sons of wealthy landowners to the school, with the idea of educating them in intelligent supervision of their estates, but they remained so short a time that he felt he was not accomplishing his aim. Hence he established a *literary institute* where the ordinary classical education was given, but as far as possible Pestalozzian methods were used and physical training was encouraged. Moreover the pupils in the literary institute engaged in farm

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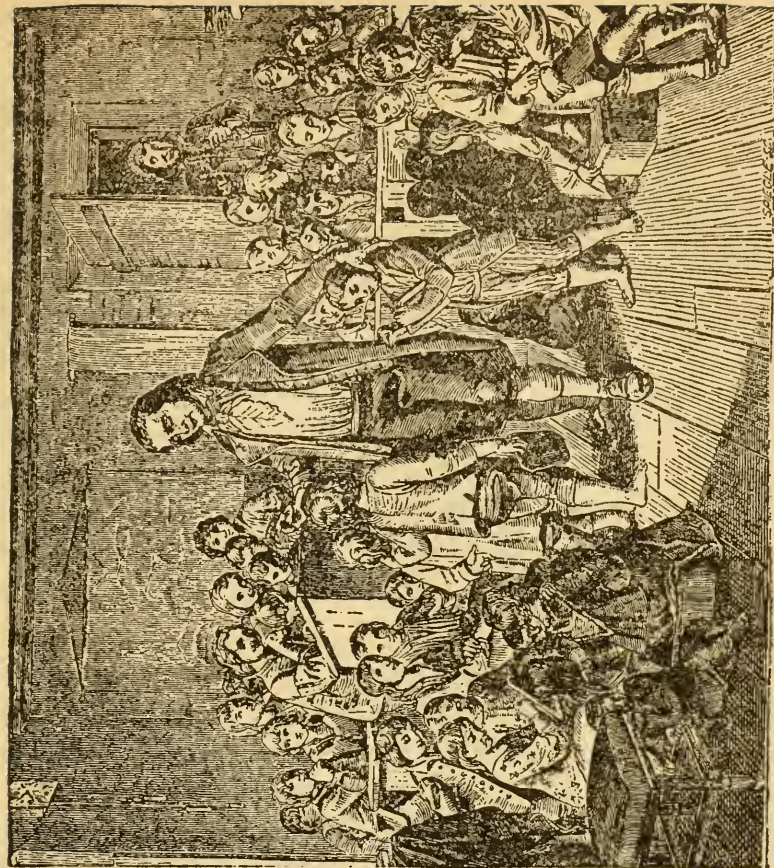
labor and technical work, and thereby came into sympathetic understanding of the children of the poor in the agricultural school. A *printing press* worked by peasant boys who were trained in that art supplied the literature and music needed. A *school for girls* and a kind of *Realschule* to give a practical education in middle-class occupations were also established. In all these institutions teachers were trained, and for a time all the teachers of Berne received their preparation at Hofwyl.

The great success of Hofwyl gave an impetus to agricultural and industrial education in western Europe and in the United States. In Switzerland every canton soon had its farm school, and most normal schools introduced some form of industrial education. In Germany, France, and England industrial education was introduced into many reform schools, as the best training for juvenile delinquents, and into orphanages as a practical preparation for life work. In the United States industrial education has gone thru three phases: (1) As the result of many reports upon Fellenberg's establishment there were founded between 1825 and 1850 "manual labor institutes" all over the United States. They were organized to provide a higher education along literary lines, the industrial feature being introduced to provide an opportunity for self-support for poor students and at the same time to secure physical exercise as the necessary basis for intellectual work. As the wealth of the country increased and formal social intercourse developed, the industrial element was gradually given up; and by the opening of the Civil War most of the schools and colleges, such as Oberlin, that had begun as "manual training institutes" had become purely literary. (2) The organization of industrial education for juvenile reform did not secure much appreciation in the United States

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until the late seventies. The early reformatories were organized on prison principles; and altho they provided industrial work, it was not for educational purposes but was prison-contract labor to make money for the institution. In the eighties the movement to substitute Pestalozzian educative labor for prison-contract labor received a great impetus and was accompanied by a movement in social reform circles to substitute the cottage plan with the spirit of family life for the one big building with the spirit of institutional life. Industrial education for the reform of juvenile delinquents proved so efficacious that it was rapidly adopted by those interested in the education of defectives, such as deaf-mutes, the blind, the feeble-minded. (3) It is to be noted that Pestalozzian industrial education in the United States has been described hitherto in connection with special institutions but not in connection with the public school system. This is due to the fact that in the latter the Froebelian movement had resulted in the introduction of manual training, which emphasized general training as against special efficiency in some trade. Recently, dissatisfaction has been found with manual training as a means of general training, and the industrial education movement which is receiving most general support at present has as its aim to train in specific trade processes—a Pestalozzian principle.

Spread of Pestalozzianism.—The publication of “Leonard and Gertrude,” the reports of the training received by the many teachers who studied at Burgdorf and Yverdon, the observations of official committees and unofficial visitors who came to those institutes in large numbers, aroused a great interest in Pestalozzi’s work in many of the European countries and in the United States. This interest resulted in the adoption of Pesta-



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lozzian methods in very many places, and this profoundly affected educational development.

In Switzerland.—Curiously enough, Switzerland, the land of Pestalozzi's nativity and activity, was slow in profiting by his experiments. This was due partly to religious differences, partly to the more generally diffused knowledge of his weaknesses, and partly to the fact that he was regarded by many as a political revolutionist. After the Revolution of 1830, however, a more liberal attitude was adopted, and Pestalozzian methods were brought into many of the schools. But the chief influence that Pestalozzi had upon Swiss education was thru the work of Fellenberg, which has already been described.

In Germany.—Nowhere has Pestalozzianism had so profound an influence as in Germany. It is not merely that such great educators as Herbart and Froebel, among many others, studied at Yverdon and became Pestalozzi's disciples, but that Pestalozzianism became one of the chief factors in the social and political regeneration of some of the German states, especially Prussia. Even before the defeat of Prussia by Napoleon at Jena in 1806, Pestalozzian missionaries had made great headway in advancing their cause. After that event Prussian statesmen were convinced that a general reform movement to improve the conditions of the common people was necessary, were Prussia to hope for regeneration. Two of Pestalozzi's disciples were made directors of public instruction, and a considerable number of able young men were sent to Yverdon to study; they returned zealous advocates of the introduction of Pestalozzian methods into the schools. One of the greatest influences of the spread of Pestalozzianism in Germany came from the philosopher Fichte, a warm personal friend of Pesta-

lozzi, who made many addresses on his work as a means of arousing German patriotism and enthusiasm for social reform. As a result of all these influences the greatest interest prevailed among the teachers of Germany, and remarkable improvements were made in school organization, equipment, and methods.

In France.—In France the military absolutism of Napoleon had nothing in common with Pestalozzi's purpose to elevate the masses thru a reformed education, and after the Restoration in 1815 French education was placed once more under ecclesiastical influences. After the Revolution of 1830 some progress was made, especially in the training of teachers, as the result of the work of Victor Cousin, who was made Minister of Public Instruction. In 1835 he issued a "Report on the State of Public Instruction in Prussia," which described the remarkable progress made in Prussia as the result of the adoption of Pestalozzian methods.

In England.—Pestalozzianism in England has had by no means so happy a history as in Germany. Its introduction into England was due chiefly to the work of the Reverend Charles Mayo and his sister Elizabeth. Mayo spent three years at Yverdon, and upon his return to England in 1822 opened a private school for children of wealthy people, in which he used Pestalozzian methods. Elizabeth Mayo described the methods in a manual for teachers called "Lessons on Objects," which was a kind of encyclopedia of the arts and sciences arranged in definite lessons. It was far beyond the comprehension of the young children for whom it was intended. But it was very popular and had the effect of formalizing Pestalozzianism in England, most teachers compelling children to memorize facts about objects instead of sensing them. The Mayos helped also to organize the Home and

Colonial Infant School Society in 1836, which was devoted to extending the system of infant schools that had grown up in England after the Napoleonic war. The Society established a model infant school and a training college for teachers; these had a great influence in spreading this Anglicized Pestalozzianism, which had little of the true spirit of the great reformer.

In the United States.—It was the English formalized Pestalozzianism that finally affected education in the United States. The movement was first brought over by one of Pestalozzi's assistants, who had been invited by a Philadelphia philanthropist to open a school there. He remained but a few years and had comparatively little influence. The second way in which the movement secured attention in the United States was by the publication of official and unofficial reports about it. The most influential of these were the translation of "Cousin's Report" and particularly the seventh *Annual Report* of Horace Mann in 1843. This was the result of personal observation upon his part and caused a great sensation by its implied condemnation of American methods. Henry Barnard, thru his publications and his activities as Commissioner of Education of Connecticut and as first United States Commissioner of Education, also had a great influence in stimulating an interest in Pestalozzianism in the United States.

As a result of these influences the Prussian form of Pestalozzianism was introduced into a number of elementary schools and also into a few of the normal schools in New England, but its effect was comparatively circumscribed. The deciding influence in the introduction of Pestalozzianism in the United States was the *Oswego movement*, inaugurated in 1860 by Mr. Edward A. Sheldon, who was then Superintendent of Schools of Oswego,

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N. Y. Mr. Sheldon became acquainted with Pestalozzi's ideas as the result of observing a collection of Pestalozzian method materials at Toronto, Canada, and of reading the publications of the Home and Colonial Infant School Society. He determined to introduce Pestalozzian methods into his schools and imported from England the necessary books and equipment. Then he organized a training class for teachers and invited over a training teacher from the Mayo school. The Oswego movement determined the kind of Pestalozzianism that was to prevail in American schools, because it was inaugurated at a psychological moment. The period succeeding 1860 was characterized by the establishment of normal schools and training schools thruout the north, and the Oswego institution, which had been made a state normal school in 1866, provided most of the experts to teach methods. The Oswego system emphasized the "object lesson" as a chief method of instruction, but was severely criticized by some educators on the ground of formalism. Nevertheless it received the approval of a committee of the National Education Association in 1865, and for the next generation it was the most important single influence in the development of our schools. However, recent movements in methodology and educational psychology have been away from the Oswego methods.

B. THE HERBARTIAN MOVEMENT

Relation of Herbart to Pestalozzi.—The career and work of Herbart are in most particulars the antitheses of those of Pestalozzi. The latter was a visionary, an enthusiastic reformer in the field of education as a means of social betterment, a man whose educational practices were based largely upon a remarkable intuitive knowl-

edge of child nature. The former led a wholly academic career, was comparatively uninterested in the great social changes taking place about him, and organized a system of education in part as the result of philosophic reflection. Both were actuated by the desire to formulate principles based upon their own observation and experiments, regardless of the forces of tradition and authority. But whereas Pestalozzi confined his work to the beginnings of mental development, to the training in sense-perception by means of exercises in observation, Herbart, accepting Pestalozzi's contribution, explained the entire development of the mind from simple ideas to deliberate actions and the proper place of instruction in the process of development. The two men supplemented each other. Pestalozzi's perception led to a knowledge of the physical world and resulted in an emphasis upon nature study, geography, drawing, and oral composition. Herbart's moral training aimed at a knowledge of the moral universe and resulted in an emphasis upon history and literature. Herbart freely admitted his indebtedness to Pestalozzi.

Career of Johann Friedrich Herbart (1776-1841).—Herbart was fortunate in his parentage and training. His father was a learned man and a public official. His mother was a woman of rare intelligence, who personally supervised the early education of her son. He very early showed a preference for Greek, mathematics, and metaphysics, and this preference had a marked effect upon his pedagogical views. At the Gymnasium of his native town, Oldenburg, and especially at the University of Jena, Herbart was deeply influenced by the spirit and ideals of the new humanism which prevailed there, which exalted the Greek culture and view of life above Latin. Before taking his degree he became private tutor to

the three sons of the Governor of Interlaken, Switzerland, and his observations of these children were given system and order thru the fact that he had to make written reports from time to time to their father. The influence of the new humanism was shown in his practice of beginning the study of Greek with the *Odyssey* as his chief textbook, because he considered it the best starting point for moral education. The three years' experience which he had with these children provided him with the ideas and materials for his pedagogical theory, and he always afterwards maintained that the careful and prolonged observation of the mental development of a few children was a necessary basis for a teacher's training. [This experience, moreover, led him to emphasize the necessity of studying the needs and powers of the individual child and making education conform to them. Herbart's difficult and metaphysical psychology was developed in later life to justify his pedagogical principles. A thoro and detailed knowledge of it is not necessary to an understanding of his educational system.]

While in Switzerland Herbart visited Pestalozzi's school at Burgdorf and wrote a sympathetic account of his observations; and when he again took up his studies to secure his degree, he warmly advocated in lectures to laymen the ideas of Pestalozzi. From 1802 to 1808 he lectured on philosophy and pedagogy at the University of Göttingen, and, among other works, he published while there his "Science of Education." In 1809 he received the high honor of a call to the chair of philosophy at Königsberg, which but four years before had been occupied by Immanuel Kant. He remained there until 1835, when the reactionary attitude of the Prussian government caused his withdrawal to the more

liberal atmosphere of Göttingen. While at Königsberg, however, he established his pedagogical seminar for the advanced students in educational problems, and a practice school to provide experience for these students and also opportunities for experiments in methods of teaching. In 1835 he published his most important work, "The Outlines of Educational Doctrine," which, unlike the "Science of Education," is not a metaphysical treatise but a clear and practical exposition of his pedagogy. He died at Göttingen in 1841, having, as stated above, lived a purely academic life in an atmosphere of calm reflection.

Herbart's Educational System. 1. *The Aim of Education.*—The moral end of life, character, is the aim of education. This was not to be attained, as with Rousseau, by cultivating the native capacities of the child; nor, as with Pestalozzi, by developing all the faculties harmoniously. Herbart in fact rejected the "faculty psychology" of the mind and its pedagogic corollary, the dogma of formal discipline. The individual is destined to live with his fellow men in society, and the aim of education can be attained only by analyzing the social interests of men to discover which are best for the educated man, and then by means of instruction to enable the individual to develop and apply them. It is evident what an emphasis such a view puts upon the place both of knowledge and of instruction in education. The first step towards the realization of the aim of education is to develop in the individual "many-sidedness" of interest. This is an entirely different conception of interest from that taught by Professor Dewey, who looks upon interest as a cause of knowledge and hence a means to education. Herbart also used interest in this sense, as we shall see, but primarily as a result of knowledge

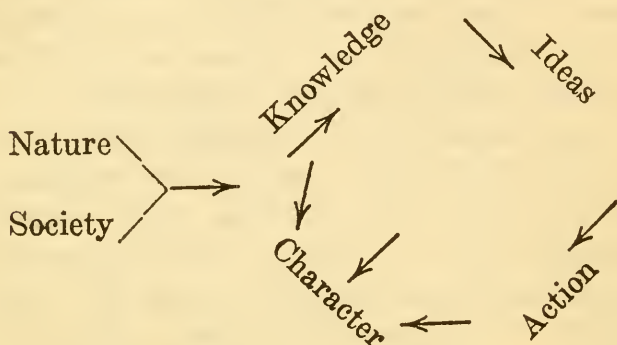
and hence an end of education. As Professor Parker says, he “considered *interest as a temporary means* subordinate to the larger question of *interests as permanent products* of education.” The more thoroly the teacher builds up by means of instruction a number of fine interests in the individual which will become springs to action, the more successful will he be in developing moral character without sacrificing individuality.

2. *Content of Education*.—Man’s interests come from his experience with things and his intercourse with people. Hence we have two main branches of instruction: the scientific, including natural science and mathematics; and the social or historical, including the chief products of man’s social evolution, viz., language, literature, and history. Altho both these branches of instruction are important to enable man to find his place in the world, the social subjects, or “historical” subjects, as Herbart calls them, offer the best opportunity to color the facts with “good will.” They are, therefore, especially necessary to an understanding of human relations and to the attainment of the moral end of education. As stated above, knowledge comes from two sources, nature and society. This knowledge leads to ideas which in turn lead to action. Character, the end of education, thus has its beginning in knowledge and its end in action. This is Herbart’s “cycle of thought,” and the importance is readily seen of instruction which will determine the character of the child according to the nature of the ideas presented and the manner in which they are acquired.

3. *Method of Instruction*.—A. Interest.—Not all instruction is educative. To be educative it must first be characterized by the fact that it arouses interest, which is the kind of mental activity that teaching should stimu-

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late. Interest is the pleasurable tone that accompanies the reception of an idea by the mind; it is measured by the energy which a person puts forth to get the idea or experience. By means of interest attention is freely given to lessons, and need not, therefore, be secured by extraneous methods. It is the one feeling that normally assists rather than retards the action of reason, hence its invaluable character in the teaching process.



HERBART'S "CYCLE OF THOUGHT."

B. Apperception.—It cannot be expected that a child will be interested in what is so remote from his own experience as to be "hard" for him to understand. The old education assumed that children had the necessary experience with which to relate new ideas. Pestalozzi knew better and provided the experiences. Herbart showed that the interpretation of new experience depends in the first place upon a sufficient fund of past experience, so that just the right ideas may be brought up in the child's mind, and also upon arousing the right emotional attitude, the right frame of mind for the reception of the new experience. This is the meaning of

apperception, the interpretation of the new in terms of the old.

C. General Method.—Apperception teaches that the mind receives and assimilates ideas in a certain way; hence any subject, no matter what its material, can be presented according to a general method. Herbart outlined four steps in such a general method but it was afterward modified and extended by his disciples. *The Method-Whole* or *Five Formal Steps of the Recitation* with their meanings today are as follows: (1) Preparation. According to the principle of apperception, the child's mind should be prepared for the new material by recalling to his mind the ideas he already has which will enable him readily to assimilate the new and which will put him in the proper frame of mind to do so. (2) Presentation, the actual statement and the explanation of the new experience to be appropriated. (3) Association, the actual combination of the new with the old. (4) Generalization, the drawing of the rule, definition, or general principle resulting from the comparison of particular instances that took place in the third step. (5) Application, the testing of the understanding of the general principle thru the solution of assigned tasks and problems. The first four steps are inductive, the fifth deductive. Herbart did not elaborate his general method and did not make clear whether these steps were to apply to each lesson unit or to the subject as a whole. His followers usually have applied it to the individual recitation. The five formal steps have generally been adopted in the normal schools of the United States as forming the best method of the recitation. To the extent that they furnish young teachers a standard by means of which they can plan out a lesson in advance, they serve a useful purpose. The danger is that they

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may become a pedagogical strait-jacket and kill the spontaneity of a recitation.

D. Correlation.—Herbart maintained that school subjects should be so organized into a curriculum that they will present a unified world to the consciousness of the child and thereby strengthen and not disperse the many-sidedness of interest. Instruction in any subject fails pedagogically when the ideas generated form an isolated group. Herbart himself merely suggested the idea of correlation, but his disciples elaborated it. He suggested that the *Odyssey* be the first book read, because it represents the activities of the race in its youth and hence would appeal to the individual child. He believed that the *Odyssey* should be followed by other Greek classics, combined with the study of periods of history selected to describe the growth of complexity in human interests. As we shall see, Ziller developed this idea into the culture-epoch theory.

Influence of Herbart.—So great has been the influence of Herbart and his followers upon the educational practice of the two countries which have made the greatest progress in education in the later nineteenth century—namely, Germany and the United States—that it will be necessary to consider in some detail his influence in those countries. Wherever his educational principles have been accepted, there has followed a great emphasis upon: (1) the importance of school instruction in developing moral character, and the necessity of relying upon human nurture rather than the natural capacities of the child to attain that end; (2) the need of sound methods of teaching, based upon a knowledge of the way in which the mind acts and expands; (3) the exaltation of the teacher in the educational process, and the need of careful training for the teaching vocation.

The Herbartian Movement in Germany.—For some years Herbart's principles received comparatively little attention, but in the decade beginning in 1860 there developed two remarkable centers of Herbartian influence, one at the University of Leipzig and the other at the University of Jena. At both universities pedagogical seminars and practice schools were established, where the principles of Herbart received not only theoretical consideration but practical application. In each university a great leader determined the direction in which the movement was to go.

Tuiskon Ziller (1817-1883).—Professor Ziller, of Leipzig, was the first to arouse general interest in Herbart, thru the publication in 1865 of his book entitled "Basis of the Doctrine of Instruction as a Moral Force." The interest aroused by this publication resulted in the founding of the Association for the Scientific Study of Education, of which Ziller was the first president, and which soon had branches everywhere thruout Germany. Ziller was quite independent in his attempt to realize Herbartian principles, and was far more radical than his master in their development. Herbart had in mind the secondary school when he predicated the superior value of the historical subjects for moral training. Ziller determined to make the Herbartian pedagogy the basis of the work of the German elementary school. The first evidence of this was his development of Herbart's principle of *correlation* into one of *concentration*, i. e., the unification of all school instruction upon the one central core study which will have the greatest practical value in revealing the moral universe to the mind of the child. Ziller considered history and literature best fitted to provide the material that serves to accomplish this end, and he organized for the eight grades of the ele-

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mentary school an historical course having that object in view.

Tho of undeniable importance, the *culture-epoch theory* which Ziller elaborated was an incidental corollary to his principle of concentration. It is a pedagogical application of the biological theory of recapitulation, i. e., that the individual in his physical development from the embryo to the adult recapitulates the same stages of development that took place in the evolution of the species. Hence, to conform to the proper order in the psychological development of the child, the materials for instruction should be selected and arranged according to stages in the cultural development of the race. Tho the culture-epoch theory has had such eminent champions as Herbert Spencer in England and G. Stanley Hall in the United States, it is really of only academic interest and has seldom been made the basis of a course of study. The practical difficulty in the religious education of the child of first treating him as a little heathen offering up animal sacrifices, and then as a Jewish child, before considering him a Christian, is paralleled by similar difficulties in every other subject. This radical and exaggerated development of Herbart's principle of correlation is only one instance of the independent manner in which Ziller treated the doctrines of his master. As we have seen, he also elaborated Herbart's general method into the five formal steps. In fact, he gave the most complete, tho exaggerated, theoretical exposition of Herbart's principles.

Wilhelm Rein (1847).—The University of Jena at first brought forth a very moderate restatement of Herbart's principles; but when Professor Wilhelm Rein, a pupil of Ziller, became head of the pedagogical seminar and practice school there in 1885, he developed the actual

practice according to the principles of Ziller. However, his work was eminently practical; nowhere else was there given so fine a combination of theoretical exposition and practical demonstration. Rein worked out the course of study for the eight years of the elementary school in great detail, and the student-teachers watched it in operation in the practice school and discussed what they saw in seminar. Under Rein the University of Jena became the great center of Herbartianism, from which missionaries carried it to the United States. In the meantime the principles of Herbart caused modifications in the content and methods of the German schools, which have brought about a high degree of excellence in the character of instruction.

The Herbartian Movement in the United States.—The Herbartian influence reached the United States in the early nineties of the last century, brought hither by men who had studied at Jena in the eighties. The most influential of these men were Charles De Garmo, who published "The Essentials of Method" in 1889 and later became professor of education at Cornell; Charles A. McMurry, who published his "General Method" in 1892 and is now professor of education in the George Peabody College for Teachers at Nashville, Tennessee, and his brother, Frank M. McMurry, who with Charles published "The Method of the Recitation" in 1897 and is now professor of elementary education in Teachers College, Columbia University. These men and others established the National Herbart Society in 1892, which at first confined itself to a consideration of strictly Herbartian topics, such as interest, correlation, apperception, the method of the recitation, and moral education. In 1902, however, the name of the society was changed to the National Society for the Study of Education; and

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it no longer stands for any particular creed, but seeks in aim, spirit, and method to be scientific. By that time, however, Herbartianism had won most of the normal schools to its principles and thru the teachers which they sent out had greatly influenced the work of the elementary schools.

Influence on the Curriculum.—That influence was first felt in the curriculum. The Herbartian emphasis upon history and literature as the best material for instruction that should result in the development of moral character effected a marked change of attitude towards the teaching of those subjects. Before the Civil War, history received little attention in the public schools. After the War American history only was taught in the upper grades and practically with the sole aim of developing patriotism. In the last decade of the nineteenth century, largely due to the Herbartian influence, a much broader view of the teaching of history became prevalent. Ancient, European, and especially English history received attention, an understanding of the social life rather than the development of patriotism became the aim, and the subject was taught in the lower grades by means of biographical and historical stories. A similar change has taken place in the teaching of literature. Before the Civil War the reading books of the children had in view religious and moral influences and the training in oratory. After the war, the secular material received a larger place, it consisted usually of brief extracts from the great writers, and the aim of the reading lesson was usually to train in oral expression. Silent reading and the training in habits of wide general reading received little attention. Since 1890, however, the tendency is to give attention to the literary quality of the reading matter by the study of whole

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poems and stories, and thereby to give a wide acquaintance with general literature.

Influence on Method.—Herbart's principle of correlation has also deeply influenced the organization of the curriculum in the United States. In 1895 the report of the Committee of Fifteen of the National Education Association, on elementary education, started a number of movements looking to the discovery of some basis of unity in the curriculum resulting from a proper correlation of studies. The report of the Association's Committee of Ten similarly aimed to secure unification for secondary education. Generally in the United States correlation has taken a moderate form such as interrelating the work of geography, history, and civics, or of geography and science, or of arithmetic and constructive work. But in 1894 Colonel Parker, the principal of the Cook County (Illinois) Normal School, adopted Ziller's principle of concentration, making the sciences, especially geography, the central subjects of study. The controversy that took place in the last decade of the nineteenth century between the advocates of interest and of effort in education, and the gradual adoption of the method whole by the normal schools, are but a few other instances of the influence the Herbartian movement has had upon American education. In fact, tho no one calls himself an Herbartian today, it would be hard to overestimate the effect of the movement upon our schools.

C. THE FROEBELIAN MOVEMENT

Friedrich Wilhelm August Froebel (1782-1852).—This most eminent disciple of Pestalozzi to whom he owed the inspiration for his practical work differed from his master in not deriving his educational theories from

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experience, but from a mystical philosophy which he formulated early in life. But just as we have seen that what is most valuable in Herbart's educational system is in no need of the support of his metaphysical psychology, so what has proved to be of permanent value in Froebel's system does not depend for its soundness upon his mystical philosophy. Moreover, his pedagogical principles can be understood with but slight reference to it.

The Life of Froebel.—Froebel's early career was not a happy one. His mother died in his infancy and his father, the overworked pastor of a large parish, had little sympathy with the lonely, dreamy boy and left him to the control of a harsh stepmother. The remembrance of his early childhood caused Froebel ever afterward to emphasize love and sympathy as the only relation that should exist between teacher and child. At ten he was allowed to live with an uncle, who treated him most kindly and helped him in his formal school work in which he showed neither great interest nor great ability. At fifteen he was apprenticed to a forester, and from that time until eight years later, when he finally decided to make teaching his vocation, he was engaged in a variety of occupations that brought him into contact with and developed his great love of nature. During these eight years he had but little additional systematic education, tho he spent some months at Jena with his brother, who was a student of medicine. While there he came under the influence of the philosophy of Fichte and Schelling, which deepened the mysticism that was part of his temperament, and he was also much impressed by the favorable attitude towards evolution adopted in scientific circles there. Finally he decided to become an architect and went to Frankfort to study

for that vocation, but was persuaded by the director of a Pestalozzian school there to become a teacher in his school (1805). Three years later he went with three pupils to Yverdon, where he spent two years in studying Pestalozzi's method, and became an enthusiastic Pestalozzian. The next six years he devoted to pursuing his university studies, serving in the Prussian army against Napoleon, and acting as an assistant curator in a mineralogical museum at Berlin. In the meantime he had carefully studied the works of Rousseau, Basedow, and Pestalozzi.

In 1816, at the age of thirty-four, he opened a school at Griesheim, which he moved the next year to Keilhau. The school at first had as pupils only his five nephews. It was conducted upon Pestalozzian lines, but even then the germ of the kindergarten idea was present, for much of the training was obtained thru play. In 1825 a hostile government inspector was constrained to praise the school for its success in the application of the principle of self-activity in children, but despite its pedagogic success financial difficulties compelled Froebel to leave it and to accept in succession a number of teaching positions in Switzerland. In the meantime, however, he had published his "Education of Man" (1826), his most important pedagogical work, which, tho characterized by much mysticism and symbolism, contains the best exposition of his ideas. A friend had drawn to his attention the writings of Comenius, and the latter's description of a school of the mother's knee confirmed Froebel in the belief that had slowly formed in his mind that the reform most needed in education was that of the earliest years of childhood. Educational theorists had for ages preached the importance of caring for the earliest impressions made on the plastic mind

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of the child, but no one had attempted to organize early education with that object in view. Froebel had already worked out many games, plays, songs, and occupations when he opened a "school for little children" at Blankenburg in 1837, but it was not until 1840 that he hit upon the name *Kindergarten* for it. The remaining years of his life were devoted to expounding his ideas in pamphlets, to expanding and improving the materials of the kindergarten, and to training girls to become kindergarten teachers. Unfortunately the reactionary Prussian government, confusing Froebel's teachings with those of a revolutionary nephew of the same name, prohibited in 1851 the establishment of kindergartens in Prussia, a prohibition which remained in force until 1860. Froebel's strength could not survive this blow and he died the following year, 1852.

The Aim of Education: Development.—Froebel agrees thoroly with Rousseau in his statement of the aim of education, viz., development, development of the inborn capacities and powers of the child. But he is wholly opposed to Rousseau in his explanation of this aim. As stated before, Froebel was not only an intensely religious man, but a mystic, and he constantly resorts to symbolism and far-fetched analogies wholly alien to the pure naturalism of Rousseau. Stripped of its mysticism, his explanation was to the effect that there is one underlying power in the universe, God, which manifests itself as force in nature and consciousness in man. Nature and man, therefore, are one, and a study of the changes in the evolution of nature will throw light upon similar changes in the development of man. Hence the hidden meanings which Froebel found in natural objects, which he believed were of great value in revealing the world to the child. Humanity as a whole is re-

vealed in each child, but in a particular, unique way; hence education must provide for the development of the free personality of every child, it must guide but not restrict, it must not interfere with the divinity in each child.

Self-Activity or Motor Expression: The Method of Development.—Froebel was in accord with Rousseau in considering the child a behaving, not a learning, animal. The child's chief characteristic is self-activity, activity determined by his own interests and desires. Hence education should build upon this primary instinct; the child should learn, but learn by doing. Froebel made a great step in advance over Pestalozzi, for the latter's sense-perception instruction was chiefly a matter of passive observation. Froebel, on the contrary, was strong in his emphasis upon motor-expression, education by doing, as having the greatest developing power, and therefore made it the essential instead of the incidental factor in school work. The Herbartians, too, made a place for doing in the fifth step of the recitation, i. e., application, but with Froebel motor-expression was not one step but all steps in the educative process. The education of his day he considered defective, because it developed the powers of thinking faster than the power of realizing thought in action. Motor-expression developed the powers of acquisition and accomplishment together, hence there was no break between thought and action.

Social Participation: The Means of Development.—If Froebel followed Rousseau in the aim and method of education, he did not in the means. Froebel believed as thoroly as Aristotle that man is a social animal and can realize his humanity only in coöperation with his fellow men. Moreover, he maintained that the child has a

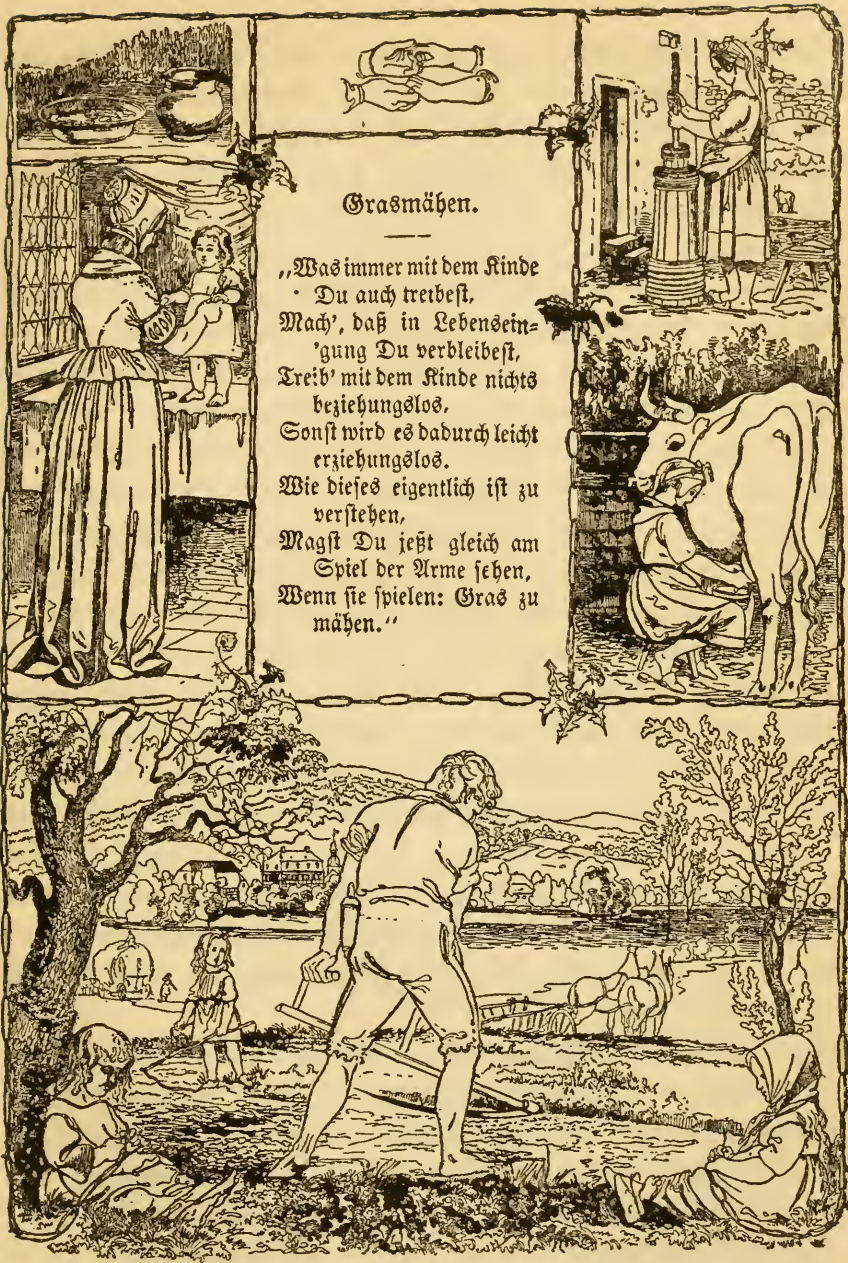
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mechanism of instincts which impels him to coöperative action, as can easily be seen by watching his games. Hence from infancy social coöperation should be cultivated for the physical, moral, and intellectual benefits that accrue from it. The schoolroom is society in miniature.

The Kindergarten.—The three great principles of education of Froebel, viz., development as the aim, motor-expression as the method, and social coöperation as the means, found embodiment in the kindergarten. The kindergarten was not the first educational institution organized for children below the ordinary school age, the infant school in England preceding it by a few years. But the infant school did not compare with the kindergarten in importance, being a mere expedient to meet wretched industrial conditions¹ and having no scientific educational foundation. The kindergarten, on the contrary, was organized to conform to the child's instincts, impulses, and feelings. As the primary form in which his self-activity manifests itself is play, the kindergarten is based upon the play instinct—is, in fact, play organized to educational ends. The kindergarten aims primarily to secure development in the child by helping him to express himself. Incidentally he acquires knowledge, but the gaining of knowledge is not the aim.

The forms of expression which Froebel used most in the kindergarten were (1) gesture, (2) song, and (3) construction, with language as a concomitant of all three. Moreover, whenever possible these forms of expression were to be coördinated, e. g., when the teacher had told a story it was to be retold by the child not only orally in speech, but dramatically in gesture, musically

¹ See p. 294.



Grasmähen.

„Was immer mit dem Kinde
 Du auch treibest,
 Mach', daß in Lebensein-
 'gung Du verbleibest,
 Treib' mit dem Kinde nichts
 beziehungslos.
 Sonst wird es dadurch leicht
 erziehungslos.
 Wie dieses eigentlich ist zu
 verstehen,
 Magst Du jetzt gleich am
 Spiel der Arme sehen,
 Wenn sie spielen: Gras zu
 mähen.“

SHOWING THE CHILD SOME OF THE HUMAN ACTIVITIES NECESSARY
 FOR LIFE

From Blow's "Mottoes and Commentaries of Froebel's Mother
 Play"

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in song, constructively in paper, clay, blocks. The materials for use in the work of the kindergarten consisted of (1) the "Mother Play and Nursery Songs," (2) the gifts, (3) the occupations. The "Mother Play and Nursery Songs" was a small book of fifty songs, each accompanied by a picture and explanatory notes. The songs describe simple nursery games like hide-and-seek, or the imitations of some trade like the carpenter's. It can readily be seen what an opportunity they offer for instructional purposes along kindergarten lines. In fact, the "Mother Play" has been one of the chief instruments in the training of kindergartners. The "gifts" and "occupations" consist of materials for stimulating the child's motor-expression, the gifts consisting of materials that do not change their form in use, like the sphere, cube, cylinder, sticks, and tablets, and the occupations consisting of materials that are reshaped and transformed in use, like sand, clay, paper, and cardboard. The more recent organization of the kindergarten has transferred the emphasis from the gifts to the occupations, as tending to develop greater freedom of expression. The work of the kindergarten was and is carried on as if it were a miniature society in which the little citizens are learning their duties and privileges and the need of mutual helpfulness.

Influence of Froebel.—Tho the influences exerted by Pestalozzi, Herbart, and Froebel are so inextricably interwoven in the educational practice of today that it is extremely difficult to trace any one of them, it can hardly be doubted that the most important streams of thought in present elementary education flow from Froebel. The symbolic values attached to the gifts and occupations have been replaced in the kindergarten practice of today by an emphasis upon reality, due to a

better selection of materials and activities. And tho the kindergarten is the chief bequest of Froebel, his system is just as applicable to higher stages of education, and his influence upon a number of other practices has been so profound as to require some attention.

Play.—Emphasis now is upon the human animal as primarily an acting, not a learning, animal. This is due to the new psychology which predicates feeling and action as primary elements of mind, and intellect as a product of their interaction. Hence the soundness of Froebel's insistence upon the educational value of play, not for physical welfare, the ground upon which it was usually defended, but for intellectual and moral training, for which Froebel considered it of supreme value. Froebel realized his ideas of the value of play only in the kindergarten, but the school has learned that in play the individual reveals himself and finds the social world revealed to him far better than in any other activity. Hence play in its variety of forms has its place today in all branches of education, elementary, secondary, and higher.

Manual Training.—That Froebel emphasized constructive work as a means of expression and development, not only for the early but for the later years of the child's life, is made evident by his scheme for a manual training school which he proposed to establish at Helba, Germany. And tho other men were advocating the same kind of education at the same time wholly independently of Froebel, three aspects of Froebel's scheme should be remembered: (1) His plan included the elements of practically all manual training schemes that have since been developed. (2) The success of the kindergarten tended to emphasize the value of manual training for older children. (3) Froebel was the first to advocate

manual work on the educational grounds which are used to justify it today. Rousseau believed in handwork and wanted everybody to learn a trade, but for social and economic reasons. Pestalozzi's manual work was primarily to train in sense-perception in order to enable the child better to acquire knowledge. Froebel emphasized it as a form of expression of ideas, as a way of developing creative power. Hence the manual training which he advocated must be distinguished from industrial education, which has competed with it for a place in the school. The one makes use of constructive activities for general educative purposes and is provided for the child, whatever his future vocation, just the same as geography or arithmetic. The other looks to industrial efficiency in some particular branch of trade, and has a specific educational purpose.

Spread of Froebelianism in Europe.—Prohibited in Prussia, the kindergarten was brought to foreign countries by the devoted disciples of Froebel, especially by the Baroness von Bülow. Her social position and her enthusiasm secured considerable success in the establishment of kindergartens thruout western Europe. In England and in France the kindergarten was grafted on the infant school and gave the latter Froebel's methods rather than his fundamental idea. In Germany, largely thru the Baroness von Bülow's efforts, there was established in 1867 a Froebel Union, which had a great influence in spreading Froebel's influence by means of journals and training schools. Nevertheless, the kindergarten in Germany has never been recognized as a part of the regular school system and is usually upon a voluntary basis.

The manual training movement began in Finland, one of whose prominent educators determined to carry the

active occupations of the kindergarten up into the elementary grades and impart manual dexterity to the pupils. The Finnish system influenced in turn the Swedish sloyd system, which had developed independently of it. Swedish sloyd had started as an economic measure to revive domestic industries, and the aim was to teach the elementary trades. But after the Finnish influence was felt, the Swedish sloyd adopted the general educative aim, i. e., to develop manual dexterity and the ability to use tools.

Froebelianism in the United States.—A. *The Kindergarten*.—To consider in detail the influence of Froebelianism on education in the United States would mean to study practically every important educational tendency of the present time. We have space only for the few that have wielded the greatest influence, and the first of these is, of course, the kindergarten. Some of the cultured Germans who had emigrated to the United States after the revolution of 1848 opened private schools for the education of their children, and these usually had kindergartens attached to them. Miss Elizabeth Peabody of Boston was influenced by these and opened the first kindergarten in the United States for English-speaking children in 1860, and was also chiefly instrumental in founding the first training school for kindergartners in 1868. The movement spread with great rapidity, and in the seventies and eighties many organizations were established thruout the country, having for their aim the maintenance of kindergartens. These were all private, however, and the kindergarten movement could not have its proper educational influence until it was introduced into the public school system. This took place in 1873, when Dr. William T. Harris (to whom American education owes the introduction of so

many good influences), as superintendent of education of St. Louis, made the kindergarten a part of the public school system of that city. Since then it has become part of the public school system of most cities of the country. In his efforts to secure the general adoption of the kindergarten, Dr. Harris was ably assisted by Miss Susan Blow, one of the most influential advocates of the kindergarten movement. Miss Blow not only wrote and spoke extensively in its favor, but established a training school at St. Louis, where Dr. Harris had incorporated the kindergarten in the school system, and from this training school missionaries went out in every direction. Miss Blow became the leader of the conservative school, which emphasized the symbolism of the kindergarten materials, a position which is gradually giving way to a more liberal interpretation of Froebel's principles. Today the number of journals, magazines, and associations devoted to the cause of the kindergarten is excelled in influence only by the fine training schools maintained thruout the country.

B. The Manual Training Movement.—The manual training movement in the United States was one of the results of the Centennial Exposition of 1876 at Philadelphia. The Russian exhibit at the Exposition prompted educators in our country to advocate drawing, design work, and constructive work as part of our educational curriculum. At first manual training was introduced only in the high schools, and the movement spread with such rapidity after 1880, when the first manual training school was established in St. Louis, that today almost all cities have either manual training high schools or have adopted manual training as part of the general high school curriculum. In elementary education manual training was first tried out in privately maintained

schools, but its success was so evident that it was rapidly adopted into the public schools. Since 1882, when Montclair, N. J., first introduced it into both the primary and grammar grades of the elementary school, it has been adopted in some form by practically all city school systems.

C. Elementary School Practice.—In reconstructing theory and practice in elementary education in the United States, no other influence has been so effective during the past generation as the Froebelian emphasis upon education thru motor-expression and social participation. And this has been due to the efforts of Colonel Francis W. Parker (1837-1902), more than to any other single individual. As principal of the Cook County Normal School he introduced the Pestalozzian methods of teaching geography and the Herbartian scheme of concentrating the curriculum about a central study, in this case geography. But tho advocating, in season and out, all that was best in the Pestalozzian and Herbartian movements, he was the chief exponent of the belief that the adoption of Froebel's principles would revolutionize elementary education. His insistence upon training in all forms of expression as the best way to develop the thinking process and also to realize the highest possibilities of character has been adopted in theory by nearly all leaders in modern educational thought in the United States, tho but sadly realized in actual practice. Another educator who has emphasized motor-expression and the social aspect of education is Professor John Dewey, but as he worked out his ideas independently of Froebelian influence and is most influential at the present moment in the reconstruction of educational thought, we shall consider his work briefly in a later chapter.

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The Methodizers and the Problem of Government and Liberty.—It is evident even to the casual reader how far Pestalozzi, Herbart, and Froebel departed from Rousseau, who inspired their work, in their solution of the problem of reconciling individual liberty with social stability. Every one of them emphasized individuality and the importance of making instruction conform to the individual needs and aptitudes of the child. Only in that way can the inner freedom upon which they all laid stress find expression in character, which they all made the end of education. This end can be attained, however, only in life with one's fellows; hence the need of studying society to discover the really important aspects of life, then of organizing the subject matter of instruction so as to make it an epitome of life, and finally of administering the school so as to make it a society in microcosm. Tho the methodizers were primarily interested in the psychological aspect of education, in the development of the individual, the social aspect is everywhere evident in the emphasis upon education both as the means and the process of moral and social progress. And the importance of the social institutions of the home, the school, and the state in this work is everywhere made evident. It is not too much to say that these reformers paved the way for the definition of education given by Rosenkranz, "Education is the preparation for life in institutions."

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QUESTIONS, COMPARISONS, AND TOPICS FOR FURTHER STUDY

1. Show the points of resemblance and difference between the principles of Comenius and Pestalozzi, Locke and Herbart, Basedow and Froebel.

2. To what extent is "character formation" the end of school instruction?

3. Which method of moral development among the following do you favor in the school: a. Direct teaching of morals in lessons? b. The teaching of morals as incidental to the teaching of other subjects? c. Moral development as a result of classroom organization and discipline and of school administration? d. Development upon the examples of teachers?

4. To what extent can interest be made the basis of school work? Is it necessary to have "hard" subjects, problems, and situations to train will power?

5. How far can the development of individuality be made a part of the aim of school instruction?

6. In view of the organization of the high school into departments and of departmental teaching in the upper grades of the elementary school, to what extent can the principle of correlation of subjects be carried out?

7. To what extent can the subject matter of instruction be drawn directly from the life activities of the child?

8. a. Has the play element been sufficiently introduced into

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American school activities? b. Illustrate how any elementary school subject might profitably be taught as a game. c. Give instances where primary school methods have been unwisely used in more advanced instruction.

9. Illustrate, if possible, how constructive work might be used in teaching the more formal subjects of the elementary schools, like arithmetic and grammar.

10. Show how objective teaching may properly be employed in arithmetic.

11. Respecting the dictum, "Things before words," give an application advocated by: a. Comenius; b. Rousseau; c. Pestalozzi.

CHAPTER XV

THE QUESTION OF EDUCATIONAL VALUES—SCIENCE IN THE CURRICULUM—HERBERT SPENCER

Outline.—The nineteenth century witnessed a remarkable progress in pure science and a still more astonishing development of applied science. These resulted in a revolution in conditions of living and also of thinking.

A demand, therefore, arose for the inclusion of the sciences in the curricula of the schools, primarily because of the value of their content but also because of their disciplinary value. This demand was best expressed in Spencer's "Education."

As a result of the agitation arising from this demand, the sciences have won a place in the curricula of elementary, secondary, and higher institutions of education in Europe and the United States.

In Chapter X we saw that the seventeenth century witnessed a remarkable development of scientific knowledge, especially after the close of the period of religious controversy and war. This scientific development inspired successive educational innovators, who have been grouped under the term sense-realists, to demand a reform in content by introducing the study of natural phenomena, and in method by advocating inductive reasoning. The sense-realistic movement met with determined opposition from the classicists, who controlled institutional education, and it made but slight headway during the eighteenth century. But the knowledge of science became more widespread, largely thru the in-

fluence of the French encyclopedia, and it greatly impressed literary and philosophical circles. Rousseau and the naturalists deepened this impression by their exaltation of the study of nature; and the movement received another great impulse from Pestalozzi, whose insistence upon sense-perception based upon objective material logically led to nature study in elementary education and to science in higher education. But altho sense-realism was initiated by Francis Bacon in the seventeenth century and received philosophical exposition from John Locke in the early eighteenth, nowhere did it affect the education of the schools to a less extent than in England. That it continued to have little influence for the greater part of the nineteenth century is all the more remarkable when one considers the astonishing developments in pure and applied science that took place in England during that century.

The Development of Science in the Nineteenth Century.—In every field of human thought men's ways of thinking have been changed by the general acceptance of the biological theory of evolution. Beginning with Lamarek early in the century the theory was elaborated and clarified by successive thinkers, such as Darwin, Wallace, and Tyndall. In turn the special branches of biology, such as anatomy, physiology, and embryology, made the greatest strides. The investigations of Lyell and Cuvier in geology proved the tremendous age of the earth and the former existence of species now extinct. The adoption early in the century of the atomic theory in chemistry and of the undulatory theory of light in physics opened an era of rapid development in the physical sciences.

But remarkable as was the progress in pure science, still more astonishing were the developments in applied

science, resulting in inventions and discoveries that revolutionized conditions of living. The invention of such devices as the cotton-gin and the sewing-machine greatly increased production and cheapened consumption. The steamboat and the locomotive engine immensely improved the means of transportation. The telegraph and submarine cable brought all the world into immediate communication. The discovery of chloroform and anti-sepsis made for an improved practice of medicine and surgery. All these theories, discoveries, and inventions had been given to the world before Herbert Spencer published his "Education" in 1861. Practically all of them had been made outside the schools and universities, and those institutions continued their academic work as if ignorant of any change in men's social and intellectual life. But this attitude of mind was not general outside of educational institutions.

The New Conception of Culture.—Therefore a new conception of culture had been formulated by many distinguished thinkers, which emphasized elements that prepared directly for the life that the individual was to live and denied that a subject of study was cultural in proportion to its remoteness from direct relationship to life. That men's ways of thinking should have been wholly changed by the discoveries of science, that their mode of living should have been revolutionized by its applications to industry, that their political and social relations should have been transformed by the growth of new classes, interests, and activities, and yet that no subject dealing with these changes should appear in the curriculum of the school and university, seemed more absurd with the passage of time. It can readily be seen, therefore, that the progressives would determine the importance of a subject by the extent to which its content

gave the knowledge necessary to make life useful and happy, in contrast to the conservatives, who maintained that the value of a subject depended upon the mental discipline imparted while acquiring it. While most of the advocates of science emphasized the importance of mental training, they maintained that it came as a by-product of the process of gaining knowledge and was equally well obtained by the study of the sciences as by the study of the classics and mathematics. The most typical representative of the claims of science for a place in the curriculum was Herbert Spencer.

Herbert Spencer (1820-1903).—Tho born in a family of culture, Spencer did not receive a university education. He read deeply in mathematics and natural science, studied architecture and engineering, and finally engaged in editorial work. In this he acquired much of the knowledge that enabled him to compile the monumental series of works with which his name is associated. Spencer does not seem to have read widely upon educational subjects and appears to have been familiar with the ideas of only Pestalozzi among modern educational reformers. All the more remarkable, therefore, is his book "Education," in which he attacked the prevailing classical education in England. The book consists of four essays, each of which appeared at first as an article in a magazine. It is written in a most attractive style, and its somewhat convincing logic won to the cause of science many adherents.

Science as the Content of Education.—The old question, "What Knowledge is Most Worth" is the title of the first essay. Spencer answers his own question by saying it is the knowledge that prepares one for complete living. In what does complete living consist? In certain life activities, which Spencer formulates in the order of their

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importance and for which he indicates the knowledge necessary. They are: (1) Activities related to preserving life and health, for which a knowledge of the sciences of physiology and hygiene is essential. (2) Vocational activities, related to earning a living. Since the maintenance of most persons is secured thru some form of industry, a knowledge of the sciences of mathematics, chemistry, physics, and biology is requisite. (3) Domestic activities, related to family life and the rearing of children, which cannot be accomplished properly without a knowledge of the sciences of physiology, hygiene, psychology, and ethics. (4) Social and political activities related to citizenship, which demand for their proper functioning a knowledge of the sciences of history, economics, and politics. (5) Leisure activities related to the gratification of the tastes and feelings—namely, music, esthetics, and literature. Even these depend for their real enjoyment upon a knowledge of such sciences as psychology, acoustics, and mechanics. Moreover, since they occupy the leisure of life, they ought to occupy the leisure of education.

It is evident how great a reversal of educational values is propounded by Spencer in comparison with those of the prevailing education. The "culture" subjects which formed the mainstay of that education are placed by him last in importance, whereas the natural sciences, which were ignored by that education, are placed first. Because of this position Spencer has been accused of crass utilitarianism, in that he would sacrifice what is higher in life, its culture, for that which is lower, its practical advantage. As a matter of fact, Spencer was aiming at an educational reorganization in which no longer a few would be trained for a life of elegant leisure and the many for a life of soulless routine, but in

which, rather, everybody should receive an education that included some of the elements of knowledge, in the order of their relative importance. Nevertheless, in attempting to formulate such a scheme, he emphasizes the education of the head at the expense of the heart; and in order to escape a one-sided language training, he advocates a one-sided scientific training.

Science for Mental Discipline.—Having proved, as he thinks, the superior value of the sciences as the content of education in order to prepare for a useful and happy life, Spencer in the same essay combats the chief claim of the classicists, viz., that the classics are superior to any other subject for attaining the true end of education, the development of general mental power. Spencer does not rise above the traditional doctrine of the formal disciplinarians in his attack, for he assumes the existence of general mental power and its transfer from one field of mental work to another. He simply asserts that the sciences are superior to languages for this purpose because, while the latter train the memory only, the former do that and in addition exercise the understanding, cultivate the judgment, and develop sound habits of morality. This must be true, he maintains, because if one kind of knowledge were necessary to prepare for life activities and another to develop mental power, the “beautiful economy” of nature would be destroyed. This simply begs the whole question. Biology shows that nature is very prodigal, not economical. Moreover, no student of education will admit that the disciplinary value of language and literature is confined to the memory.

Spencer's Principles of Education.—Spencer's chief contribution to educational progress was made in the first essay which raises the whole question of educational

values. While the other chapters furnish suggestive reading, they offer nothing new. In the second chapter, on Intellectual Education, Spencer does not go beyond a restatement of the principles formulated by Pestalozzi, viz., that education should proceed from the simple to the complex, from the concrete to the abstract, from the empirical to the rational, and that it should be based upon interest. The culture-epoch theory should furnish the principles for the organization of the curriculum. In the third chapter, on Moral Education, Spencer repeats Rousseau's doctrine of natural punishments as the basis for all moral training. Only in this way will the life of the individual be characterized by self-control rather than by blind subservience to authority. In the last chapter, on Physical Education, Spencer presents a fine exposition of the physiological basis of mental life, refutes the arguments in favor of the "hardening process,"¹ and emphasizes the need of attention to proper diet, clothing, exercise, and games.

Influence of Spencer.—Spencer's "Education" had a profound influence in England and a great influence in the United States. In England it startled people into inquiring anew as to the purpose of education and the best way of attaining it. And altho in his last three chapters he adds nothing new to the ideas of the great leaders who were trying to psychologize education, those ideas were new to the majority of Englishmen. It is also true that Spencer was not so radical in some of his views as other advocates of science, like Huxley, but he was more influential. It is probably not too much to say that the introduction of a "modern side" into English secondary education was primarily due to his crusade. Among the representatives of the Spencerian

¹ See p. 193.

movement in the United States the most prominent is Charles W. Eliot, who before becoming president of Harvard University was professor of chemistry there. His demand for the equivalence in value of the sciences in the course of study and for the right of election in studies was generally accepted everywhere.

Science in the Curriculum.—1. *Germany.*—The introduction of science into the curriculum upon a par with the classics has been everywhere an accomplishment of the latter part of the nineteenth century. But science in a more modest guise appeared earlier in the educational systems of every country. In Germany secondary education was first influenced in this direction thru the work of the pietists at Halle,¹ which resulted in the establishment of the *Realschule* in Berlin by Hecker in 1747. *Realschulen* were multiplied in Germany during the eighteenth century; but science did not affect the citadel of German education, the Gymnasium, until the first governmental *Lehrplan*, or syllabus for secondary education, was issued in Prussia in 1812-1816, when, as the result of the new life and influences initiated by the Weimar circle and strengthened by the French Revolution, two hours a week for the entire Gymnasium course were allotted to physics and natural history. This allotment was able to survive the period of reaction in Germany which extended over the years 1820-1860. As the result of reforms introduced in 1859 and 1882, two new types of school were established and recognized as a part of the system of secondary education on a par with the Gymnasium, viz., the *Realgymnasium* and the *Oberrealschule*. In these one and a half to twice as much science is offered as in the Gymnasium itself. Technical schools of a secondary grade, having science as a foundation for

¹ See p. 178.

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vocational work, had appeared as early as 1745, and between 1815 and 1870 became established in all the chief cities of Germany. Since the Franco-Prussian War they have greatly increased in number and importance.

In elementary education, despite the earlier efforts of Comenius,¹ science received its first extensive recognition in Germany as the result of the naturalistic movement which found lodgment in Basedow's Philanthropinum in 1774. But it owes its extension rather to the spread of Pestalozzianism in Prussian schools after 1810. Drawing and geography are now taught thruout the course, elementary science and geometry in the middle and upper classes.

In the universities formal instruction in science was given before Liebig established his laboratory at the University of Giessen in 1825, but modern scientific instruction in the universities based upon the laboratory method dates from that event.

2. *France*.—Until the expulsion of the Jesuits humanism dominated French education, and science received little attention except in two or three of the higher institutions of learning. After that event, the Oratorians (Oratory of Jesus) controlled secondary education in France and they were more friendly to science. The Revolution brought changes in education, as in other human interests. In 1794 the *École Normale* (Normal School) was founded at Paris, where such distinguished scientists as Laplace and Lagrange gave instruction; and a considerable amount of science was introduced into the *lycée*, the secondary school, which was established in 1802. Science struggled for greater recognition until 1852, when it was theoretically put upon a par with classics. Nevertheless, tho the number of

¹ See p. 171.

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courses in the various sciences and the amount of time given to them have been greatly increased in the secondary school, the scientific course does not even now equal the classical in dignity. Since the Franco-Prussian War (1870), the amount of science introduced into the elementary school in France has constantly increased. Informal instruction in science in the lower classes is now associated with drawing, constructive work, and geography; and in the higher classes regular and formal courses are given in the natural sciences. Moreover, the normal schools which train teachers for the elementary schools give very thoro instruction in the various natural sciences and emphasize their application to practical life.

3. *England*.—The work of Sir Isaac Newton at Cambridge resulted in several chairs of mathematics and the physical sciences being established there in the eighteenth century. Nevertheless science received little attention at Oxford and Cambridge until 1869, when the laboratory method was introduced; and altho in recent years there has been considerable development, those conservative institutions are still very backward in this respect. As a matter of fact, whatever advance has been made in scientific instruction in higher institutions of learning in England has come from two sources: (1) from the municipal universities that have been established in London, Liverpool, Manchester, and Birmingham; (2) from a series of higher technical institutions, which were founded by the government between 1857 and 1907, when they were all merged into a corporation known as the Imperial College of Science and Technology.

As regards English secondary education we saw in Chapter X that “realistic” studies had been introduced to some extent in the academies established by the dis-

senters in the seventeenth century. But these academies greatly declined in the eighteenth century, and as science had never been introduced in any form into the aristocratic private institutions known in England as "public schools," the nineteenth century opened with very little instruction in science in English secondary education. In the early part of the century a strong movement in opposition to the prevailing classical education was inaugurated by George Combe (1788-1858), and his friends, which resulted in the establishment after 1848 of "secular" schools in many of the cities of Great Britain, in which the curriculum was strongly scientific in character. Tho they did not live long, their existence raised the whole question of the content of the curriculum in the secondary schools and undoubtedly helped the movement, of which Herbert Spencer was the mouthpiece, for the equivalence of science in that curriculum. The equivalence was secured by the establishment of the "modern side" in the public schools after 1868, as the result of a governmental investigation which uncovered the almost complete absence of science in those institutions. This was done, however, very reluctantly by the schools, the teachers in which openly disparaged the new subjects. Even today, because of the large part played in English life by social prestige, the "modern side" has never attained the standing of the classical course. Scientific instruction has received a great impetus in secondary education as a result of the establishment by the government in recent years of many independent scientific secondary schools and the subsidizing in the existing schools of classes in the various sciences and subjects involving their application. In elementary education classes in geography and elementary science were subsidized, since only the three R's

were required subjects; but after 1900, as a result of a revision of the curriculum, they have been made prescribed subjects.

4. *The United States.*—a. Higher Education. In no other country did science receive so early recognition in education as in the United States. Practically all the colleges that were founded in the seventeenth and eighteenth centuries, beginning with Harvard, introduced some subject of science into the curriculum almost from the very beginning, usually astronomy, “natural philosophy,” or “natural history.” Instruction, it is true, was usually by lecture or out of books; for the most part it was not until the nineteenth century that laboratory demonstrations accompanied the instructor’s lectures in chemistry and physics, and not until after the middle of the century that students were provided with laboratory facilities. The publication of Darwin’s “Origin of Species” in 1859 and the spread of the belief in the doctrine of evolution by such leaders as Louis Agassiz and Asa Gray at Harvard helped to create a demand for the equivalence of science in the curriculum and for the introduction of the elective system. This was effected by President Eliot at Harvard in 1869 and gradually adopted by most other colleges and universities. In the meantime the establishment of the Rensselaer Polytechnic Institute at Troy in 1825 had inaugurated a movement for the founding of higher special institutions of applied science and technology, sometimes in association with existing institutions and sometimes independent of them. Finally the Morrill Act, passed by Congress in 1862, which appropriated thirteen million acres of public land for the maintenance in every state of a college devoted primarily, tho not exclusively, to the promotion of branches of learning related to agri-

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culture and the mechanic arts results in the establishment of similar schools of applied science in almost every state, usually, tho not always, in connection with the state universities. As a result of all these movements it is not too much to say that today science, certainly its spirit and its methods, dominates the higher education of the United States.

b. Secondary Education. The emphasis upon science in American education is primarily due to the academy.¹ As early as 1700 the Latin grammar schools had begun to make provision for practical or applied science, in particular for surveying and navigation. The first academy, that founded by Franklin in Philadelphia in 1751, had three "schools" or courses, of which two were avowedly of direct usefulness for economic life in the new land. From that time the academy was *par excellence* a secondary school that conformed closely to the needs of the people. Not only did the science of mathematics receive practical applications, but from the beginning other forms of pure science were taught. These were generally given under the title of "natural philosophy," tho astronomy and geography nearly always had a place in the curriculum. When the modern public high school began its career, it maintained the friendly attitude towards science which characterized the private academy. The earliest public high school, which was established in Boston in 1821, included geography in the first year, mathematics, navigation, and surveying in the second, and natural philosophy and astronomy in the third. As in the colleges, instruction was generally given by means of textbooks, sometimes with demonstrations by the teacher, but seldom, if ever, with laboratory practice on the part of the student. But after the Civil War

¹ See p. 164.

this defect began to be remedied; and the scientific curriculum in the high school was expanded to include physics, chemistry, botany, and zoölogy. In fact the demand that the student have a general knowledge of all these sciences resulted in a good deal of superficiality. Since the beginning of the twentieth century, however, the tendency in secondary education has been to limit each student to a few well-organized courses taught by the laboratory method, and especially to require one "general science" course of all pupils.

c. Elementary Education. Down to 1840, when Horace Mann's campaign began to have some influence, the subjects taught generally in the elementary schools of the United States were the three R's—i. e., reading, writing, and arithmetic—with spelling and grammar. Geography was the only subject of a scientific nature that received any attention, and then only in the best schools. Horace Mann's campaign was successful in securing the general adoption of physiology in the curriculum of the elementary school in the East by the commencement of the Civil War. As we saw in Chapter XIV, the Oswego movement after the war resulted in the introduction of object teaching, which, tho of a formal and stereotyped nature, was a transition to the teaching of elementary science. Since the commencement of the twentieth century the tendency has been to give a knowledge of elementary science in the form of observational "nature study," which makes a far greater appeal to children of elementary school age than systematic science.

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QUESTIONS, COMPARISONS, AND TOPICS FOR FURTHER STUDY

1. Is there any connection between the nature study movement and the present tendency to give instruction in agriculture in the rural elementary and high schools?

2. In what other ways besides the use of window-boxes for growing plants and vegetables, aquaria for fish, and excursions into the country can elementary school children be interested in nature and science?

3. How can other elementary school subjects, like literature, drawing, and constructive work, be correlated with nature study in the elementary school?

4. Is there any danger that scientific methods may be pushed too far in the teaching of such subjects as language, literature, and history in the secondary school?

5. Is there any danger that too exclusive use of the laboratory method in such sciences as physics and biology will result in an ignorance of their relation to other subjects and to the world in general?

6. Was there any justification for the religious objection to the teaching of science in the school which prevailed in the middle of the nineteenth century?

7. Is there any evidence that the adherents of natural science are taking the same unfriendly attitude towards new subjects in the curriculum that characterized the attitude of the adherents of the classics towards science in the mid-nineteenth century?

CHAPTER XVI

SOCIALIZING EDUCATION THRU PHILANTHROPY AND THRU STATE CONTROL

Outline.—The education of the nineteenth century was characterized by a socializing process which effected the almost complete secularization of education, the elimination of ecclesiastical domination, and the substitution of state support and control. The movement went thru three stages:

1. The period of philanthropy. In this period the reforms in the organization and practices of education were undertaken by voluntary effort, usually of philanthropic organizations. The Sunday school movement, the monitorial systems, and the infant school movement illustrate this stage.

2. The period of transition to state control. The motive impelling to state control differed in the different states. In Prussia the motive was to develop a strong state; in the United States, to train for citizenship; in England, state control was chiefly the result of the conflict of class interests.

3. The period of socialized education. In this last period the state has become conscious of the great purpose of education, namely, to be the instrument of society to attain its conscious goals and ideals. The social motive emphasized at first the political aspect of social life, and later the economic; and this difference in emphasis has resulted in the introduction of different subject matter and different practices.

Meaning of the Sociological Movement.—The education of the nineteenth century, as we have seen, was characterized by an insistence upon a psychological study of the child in order to make instruction conform

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to his developing powers, and it resulted in greatly improved methods of teaching. It was also characterized by a socializing process which was in the nature of a reaction against the extreme individualism of Rousseau, a process which emphasized the need of preparing the individual to live in a constantly changing social environment, and which resulted in profound changes in the subject matter of instruction and in its organization and administration. This socializing process effected the almost complete secularization of education, by the elimination of ecclesiastical domination and the substitution of state support and control. In the middle of the eighteenth century education was still dominated by religious ideals and generally controlled by ecclesiastical organizations. But the church was unable to cope with the problems resulting from the social changes that thereafter took place. It had neither the vision, the energy, nor the financial power. Nevertheless, it bitterly opposed each step in the process of socialization; hence the victory of complete social control of education was won at different times in the different nations of western Europe. It was first secured in Germany in the early part of the century, in the United States only towards its close, in France but yesterday, and in conservative England it has not yet been won. The movement has passed thru three stages: (1) the period of philanthropy, in which private organizations—usually of a charitable nature—undertook to do what the church was unable to do; (2) a transition period, during which, as a result of the political revolution in France, the growth of a new nation in the United States, and the industrial revolution in England, the movement toward social control was greatly accelerated; (3) the political period, in which the secular forces have secured control and estab-

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lished state systems of education. It will be necessary briefly to consider each of these stages in the process of socialization before considering the results of the movement as a whole.

1. THE PERIOD OF PHILANTHROPY IN EDUCATION

Social evolution has been characterized by an increasing extension of state activity. In the eighteenth century the only duties the state undertook were to protect life and property thru its legislative, executive, and judicial powers. Such social functions as street lighting, water supply, fire protection, and poor relief were under private initiative and control. Voluntary endeavor and experiment had first to show the state that an activity could and should be undertaken by the state, before that view was generally accepted. This has been especially true of education. Almost every reform in organization and practice has been first demonstrated as practicable and useful by private enterprise, before it has been adopted by the state. Hence, when it became evident that the church could not meet the educational needs of a changing civilization, society had first to rely upon the efforts of voluntary organizations. The degree to which this was true differed in the various countries, being least true in Germany where the control of education was earliest taken over by the state, and most true in England where the conception of education as necessarily supervised by the church has been longest maintained. Even in Germany we have already studied the philanthropic reforms of Francke at Halle, the Philanthropinum of Basedow at Dessau and the industrial movement of Fellenberg at Hofwyl, in Switzerland, all of which resulted in valuable reforms in the prevail-

ing system of education. But the philanthropic movements in education have been most influential in England and the United States, and we shall now turn to a brief consideration of the most important of them.

The Charity School in England.—The close of the Restoration period left England unprovided with elementary schools and the Established Church did very little to fill the void. Some charity schools were established in the seventeenth century; but the abject poverty of a large proportion of the people, the utter ignorance of the majority, the comparative indifference to the needs of poor children suggested to a group of philanthropists at the beginning of the eighteenth century the organization of the Society for Promoting Christian Knowledge. This society did splendid work in opening charity schools thruout the country, in which the children received not only free instruction and books, but often free clothing and food. The object of the schools of the Society was "to make them [the children] loyal church members and to fit them for work in that station of life in which it hath pleased their Heavenly Father to place them." These schools were, in other words, something in the nature of vocational schools to prepare girls for domestic service and boys for apprenticeship in the more laborious trades. Incidentally instruction in reading, writing, and arithmetic of an elementary nature, and much instruction in religion and morals was also provided. By the middle of the eighteenth century the Society had established more than two thousand schools, attended by more than fifty thousand children. Yet despite its modest aim and the social value of its work, it met with much opposition among many in the upper classes who feared the evil effect of education upon the "lower classes." An offshoot of

this society was the Society for the Propagation of the Gospel in Foreign Parts, which purposed to do for the colonies what the parent society was doing for the mother country. It was quite successful in establishing charity schools, especially in the middle colonies in America, and by the opposition it aroused among the dissenting sects it stimulated an interest in an extension of education among the poor.

The Sunday School Movement.—In 1780 a manufacturer of Gloucester, Robert Raikes, in the hope of doing something to lessen the ignorance and squalor among the poor of the town, opened for both adults and children a school which was to meet on Sundays. Tho Raikes did not originate the Sunday school movement he became its first great propagandist. He paid his teachers a shilling a Sunday for their work. His school was so successful that others were soon established in many cities and towns of the United Kingdom, and a Sunday School Society was founded in 1785 to extend the work. In 1786 the movement was brought to the United States and spread with great rapidity, many associations being formed to propagate the idea. It must be remembered that at first the Sunday school was as much a secular as a religious institution, and also that the teachers were paid for their work; but gradually the secular instruction was abandoned and the teaching became voluntary. It also became less efficient; but the Sunday school movement was another step in the extension of education among the masses of the people.

The Monitorial Systems of Bell and Lancaster.—In 1798 Joseph Lancaster (1778-1838) founded the first "monitorial school" in one of the districts of London inhabited by the poorest and most ignorant of the population. In order that he might extend the benefit of

his teaching to as many children as possible, he hit upon the device of using older pupils as assistant teachers for the younger children. He first taught the lesson to these "monitors," and each of them in turn taught it to the group of children that had been placed under his control. With this system a single teacher was able to direct the instruction of a very large number of pupils, Lancaster himself caring for a thousand in his school. Lancaster insisted that his aim was to establish a non-sectarian system of education, and in 1808 an association made up chiefly of dissenters was formed to organize his schools upon an efficient basis, as he had fallen badly into debt. In 1814 this association assumed the name of the British and Foreign School Society and did a remarkable service for the cause of education in founding Lancastrian schools. So successful were they that the Established Church, fearing their non-sectarian influence, established in 1811 the National Society for Promoting the Education of the Poor in the Principles of the Established Church, and this society absorbed the Society for Promoting Christian Knowledge, which has already been described. The schools of the National Society were placed under the supervision of Dr. Andrew Bell (1753-1832), who had used the monitorial system while at the head of an orphan asylum in India. They differed little from those of the British and Foreign Society, except in giving dogmatic instruction in the Anglican catechism and prayer book.

Nature of the Work of the Monitorial Societies.—The monitorial societies rendered a remarkable service to English education in a number of ways. They not only provided the sole opportunity for thousands of poor children to receive any kind of education, but their schools were efficiently organized and disciplined, the

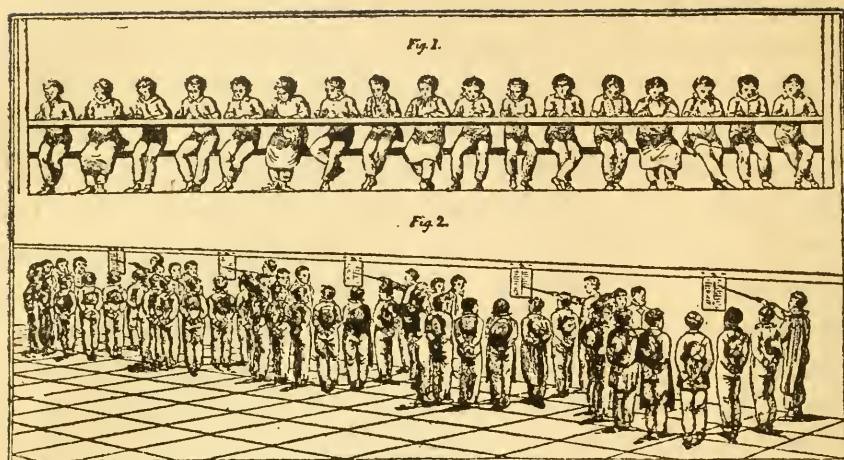
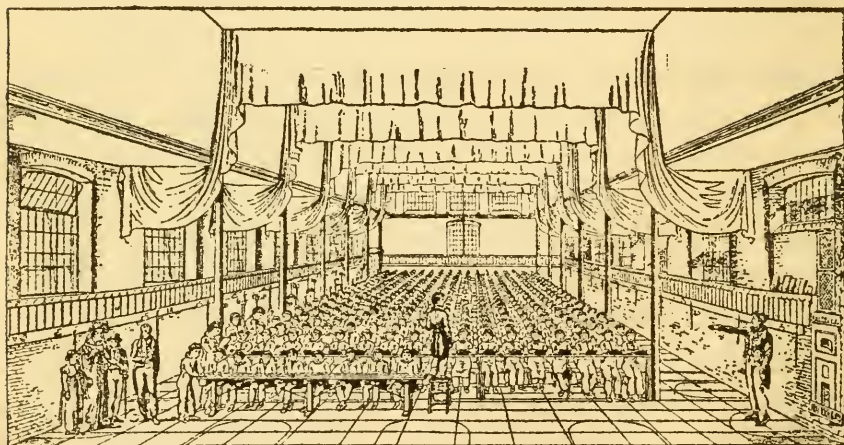


Fig. 1 shows a class seated on a form at a writing desk. Fig. 2 shows five monitors giving instruction to five classes. The boys are assembled at the draft stations, their toes to lines cut in the floor. With pointers the monitors are giving instruction from lessons suspended from the lesson rail



Interior of the Central School of the British and Foreign School Society, Borough Road, Southwark, showing 365 pupils seated

THE MONITORIAL SYSTEM OF INSTRUCTION

work was thoroly systematized, the children were well graded and received a fair knowledge of the elementary subjects. However the monitorial system has been severely criticized: the discipline was most rigid and permitted of no spontaneity; the instruction was wholly formal and mechanical and based upon memoriter work; the military organization, with its drill and precision, its system of badges and banners, offices, rewards and punishments, was wholly alien to the newer and truer conception of education which, we have seen, had developed on the Continent. But the monitorial schools were a great improvement upon the ordinary schools of the time, in which two-thirds of the child's time was wasted and the formation of slipshod habits was common. Moreover, the rivalry between the two societies kept the subject of general education before the English people and gradually prepared them for the adoption of the principle of education as a state function.

The Monitorial System in the United States.—The monitorial system of the Lancasterian type was introduced into the United States in 1806 and spread with great rapidity thruout the country. In fact it came as a godsend to the numerous charitable societies that were formed in the first two decades of the nineteenth century, having for their aim the extension of elementary education among the poor. Its comparative inexpensiveness appealed not only to such societies, but also to legislatures, when public opinion had become aroused in favor of a state system of schools. And its efficient system of grading in large and hygienic rooms, its improved apparatus and good discipline served to discredit the one-room, one-teacher, ungraded school that prevailed even in many of the cities. In fact, the monitorial sys-

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tem was generally adopted not only for elementary education but for secondary schools also, in the three decades previous to the Civil War. But as material wealth increased thruout the country and the people became better informed as to the need of education and more willing to contribute to its support, this formal and mechanical method was abandoned in favor of the psychological conceptions of Pestalozzianism.

The Infant School Movement.—This form of philanthropy in education originated in eastern France where Jean Frederic Oberlin, the pastor of a district that had been ravaged by war, attempted to give some training to the very young children under his charge. It was brought to Paris at the beginning of the nineteenth century, but was not generally adopted in France until its efficacy had been shown in England. Then in 1833 it was made part of the national system of schools, and in 1881 the name “maternal school” given to it. It is the substitute for the kindergarten in the French system; but, tho physical exercises, singing, drawing, and other kindergarten activities are present, development is not the aim, and imparting information is much more emphasized.

It was in Great Britain that the infant school had its greatest development. It was first established at New Lanark, Scotland, in 1816 by Robert Owen, who had not heard of the French movement. Owen was a philanthropic manufacturer, who adopted the infant school idea as a means of combating the evil results of the factory system on children. The foundling and orphan asylums bound out children of five, six, or seven years of age for nine-year terms to manufacturers, who were permitted to work them twelve hours a day and at the end of their apprenticeship turn them, ignorant

and degraded, into the mass of the population. Owen organized in this school a kind of education for children from three to seven in which singing, dancing, and outdoor games were associated with teaching about nature and common things, all within the comprehension of the children. It was an excellent scheme and very successful. Unfortunately when it was adopted by Samuel Wilderspin, who became the great exponent of the infant school idea, he made it in every essential respect a small copy of the school for older children, without the element of spontaneity which had been so attractive at New Lanark. Wilderspin was very active, however, in spreading the infant school idea. His own school in London was much visited, he wrote voluminously about the movement, went upon lecture tours thruout the country, and was instrumental in establishing an Infant School Society in 1824, which founded a great many such schools.

As stated in Chapter XIV, the Reverend Charles Mayo in 1834 founded the Home and Colonial School Society for training infant school teachers. The Society undertook to adopt Pestalozzian ideas in its work and this resulted in an improvement in methods, but it was a stereotyped form of Pestalozzianism, which had little of the spirit of the founder in it. Another advance was made in the seventies, when some of the practices of the kindergarten were adopted. It must not be supposed that the multiplication of infant schools, monitorial schools, and other charitable schools adequately supplied the educational needs of Great Britain. When the Reform Bill of 1832 was passed, education was being provided apparently for not more than one-third of the children of England. Real progress only began with the passage of the Forster Elementary Education Act of

1870, which established a state-supported and state-controlled school system.

Infant schools sprang up in the United States in the early twenties and spread rapidly to most of the cities of the country. At first they were separate institutions unconnected with the elementary schools, the latter sometimes, as in Boston, demanding for admission an ability to read and write. They were, moreover, nearly always conducted upon the monitorial principle, which permitted the enrollment of large numbers in one school. Generally, as in New York, the infant school developed into the primary department of the elementary school, and women were nearly always employed as teachers. The infant schools, like the monitorial schools, were generally fostered by associations of charitable people, such as the Public School Society of New York, which was founded early in the century. The work of these organizations is considered at greater length in Chapter XVIII.

2. THE PERIOD OF TRANSITION TO STATE CONTROL

Education to Develop a Strong State: Germany.—Even before the period of political and industrial revolutions the importance of education as an instrument of the state to strengthen its political organization and bring about social reform was recognized by the enlightened despots, as typified in Frederick the Great. Frederick determined to 'destroy the ecclesiastical domination of the schools in Prussia without eliminating religious instruction, and Germany has since worked out the problem of state control upon that basis. Despite Frederick's interest, however, the prolonged opposition of the clergy prevented any actual progress toward realization of the

political purpose of education until the overthrow of Prussia by Napoleon in 1806. In the struggle for national freedom that followed, it was recognized by the German leaders that a new system of education dominated by the political motive of patriotism was necessary. A reorganization was undertaken whereby the last vestiges of ecclesiastical control were removed, Pestalozzian methods of teaching introduced, and the aim to use the school to make Prussia a strong state was adopted. The adoption of the political motive in Germany in the eighteenth century and its realization in the nineteenth rendered philanthropic movements merely incidental and supplementary in German education, instead of primary as in English.

Education for Citizenship: The United States; France.—The political revolutions in the American colonies and in France emphasized the political motive from another point of view. As a result of the Revolution the United States, in theory at least, became a democracy; and the general diffusion of education as an absolute essential to the realization of the democratic ideal was recognized by early statesmen like Jefferson. But as we shall see later, in Chapter XVIII, it was not until the development of the new democracy in the West, and the disappearance of restrictions upon the suffrage in the East, that education for citizenship became the accepted aim. The intelligent participation of all in the affairs of government depends upon the education of all into an understanding of those affairs. For its own safety and preservation the state must itself undertake the education of its citizens. We find, therefore, the political motive of education for citizenship superseding the religious at a comparatively early date and the principle of the state-supported and state-controlled

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schools generally accepted by the American people before the Civil War.

The French Revolution went far beyond the American in its educational aims and proposals. Universal, compulsory, free education supported and controlled by the state was demanded by the leaders. Many laws were passed looking towards the realization of this ideal, but because of the chaotic conditions of the age little was accomplished. Napoleon established the University of France, practically as a department of the national government, to control secondary and higher education, but he ignored elementary education. And tho public elementary education was introduced in 1833, the church practically controlled it until the establishment of the Third Republic. Gambetta and the republican leaders determined that the Republic should rest upon the educational foundations demanded by the Revolution, and the political history of France during the past generation has been in part the history of the struggle between church and state for the control of education. By a series of laws beginning with that of 1881, which made primary education free, to the law of 1904, which closed the religious schools, education in France has been secularized and brought under the control of the state to a degree that has taken place in no other western nation.

Education as the Result of the Conflict of Class Interests: England.—The development of a state system of education in England has not been determined by a definite motive, as in the case of France, Germany, and the United States, but has taken place in a haphazard manner resulting from a conflict of class interests. The progress of public education has been retarded by the determination of the Established Church to maintain its control over education and by the desire generally held



A LONDON DAME SCHOOL IN 1870

From Cubberley's "History of Education Syllabus."

Macmillan Co.

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by the upper classes to keep the mass of the people in ignorance. England did not have any political revolution in the nineteenth century, but it did have a great industrial revolution. The invention of machinery for spinning and weaving, run by the stationary steam engine, resulted in the displacement of the domestic or home system of industry by the factory system. This in turn resulted in the crowding of people into new cities that grew up, particularly in the neighborhood of the coal and iron mines of the northeast. The factories were filled with women and children as well as men, working long hours and under outrageous conditions of housing and sanitation. The landed gentry, who viewed with dislike the increasing power of the manufacturers, passed a series of factory acts, beginning with that of 1802 and culminating with the great system of legislation of 1835, looking to the protection of the women and children working in the factories and mines. The manufacturing interests retorted with the passage of the Reform Bill of 1832, providing for a more equitable distribution of Parliamentary representation, and with the Repeal of the Corn Laws, removing the protective tariff upon agricultural products and cheapening the price of bread. As a result of the struggle between these interests the laboring class were enabled to secure some of their rights, among them that of education. The Factory Act of 1802 provided that apprentices should not work more than twelve hours a day and should receive instruction in reading, writing, arithmetic, and religion. And altho the law was not successfully enforced, it aroused a great amount of agitation and discussion as to whether the government had any right at all to interfere with education. This culminated in the grant in 1833 of £20,000 for the erec-

tion of schoolhouses, the money to be spent by the two monitorial societies, the British and Foreign representing the dissenters and the National representing the Established Church. It is true that the practice of giving public funds to private corporations resulted in the creation of vested interests which afterwards opposed the establishment of a public school system, but of far greater importance was the acceptance of the principle of state aid for elementary education. The forces in favor of a state-controlled and state-supported school system looked upon the Act of 1833 as only the first step in the accomplishment of their program and, after another generation of agitation, secured the passage of the Forster Elementary Education Act of 1870, establishing the "board" schools. The Act provided that whenever the national education department considered the provision for elementary education in any locality to be insufficient, it might order the election of a local school board which must maintain adequate accommodations. The schools thereby established were to share the grants of the national government with the "voluntary" schools, i. e., the schools which were partly supported by voluntary contributions, and which thereafter consisted chiefly of the schools of the National Society, those of the British and Foreign Society coalescing with the board schools. Under the act the board schools gave religious instruction, but not of any particular denomination; and the "conscience clause" of the act provided that any pupil might withdraw during the period of religious instruction should his parents so desire. The act was a compromise, and the numerous statutes having to do with education that have been enacted since then have not resulted in a secular system of education like that of France and the United States; but as we shall see

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in Chapter XVIII they have resulted in an increasing control of all schools by the state authorities.

3. THE PERIOD OF SOCIALIZED EDUCATION

The Social Motive.—It must not be supposed that, because the state during the nineteenth century gradually superseded the church in the control of education, education quickly became socialized. Traditional aims, traditional subjects, traditional methods of teaching, and traditional forms of organization and administration maintained their hold. But the state, which is the institution that represents all classes and interests of society and that represents society as an organized whole, has gradually become conscious of the great purpose of education, namely, to be the instrument of society to attain its conscious goals and ideals. Ideals change with time and social institutions alter to conform to them. Hence education is an ever varying process to prepare the individual to adjust himself to an ever changing environment and for life under institutions that are constantly being modified. This social motive emphasized at first the political aspect of social life, and later the economic; and this difference in emphasis has resulted in the introduction of different subject matter and different practices.

a. *The Political Aspect of the Social Motive.*—Education for citizenship, that is, the preparation of the individual to participate in the government of his country by voting intelligently and, if need be, discharging the duties of office satisfactorily, has had certain profound effects upon education. These may be summarized as follows:

1. The establishment of universal, free, compulsory

elementary education. Even in England the gradual extension of the suffrage to all males has made the upper classes conscious of the need "to educate our masters." In the United States the belief not only in an intelligent electorate, but in the right of that electorate to educate its own leaders, has resulted in public support of secondary and higher education.

2. Centralization of administration and supervision at the expense of the rights of localities and private interests. This is essential if compulsory education laws are to be enforced and the larger aims of the state are not to be thwarted by the ignorance and laxity of parents or local communities. This increase in state control has been accompanied by an even greater increase in public support of education.

3. A readjustment of emphasis upon subjects of instruction. If universal participation in political life is to secure social welfare, a study of social needs, social activities, and social structure is essential to preparation for good citizenship. This belief has resulted in an emphasis upon history and civics in elementary education, as against the formal studies like spelling, grammar, and the three R's; and a tendency in higher education to minimize the literary humanities in favor of the social humanities, such as politics and economics.

4. The social emphasis upon methods of teaching school subjects. History is no longer the story of the doings of kings and warriors, but of the development of the life and thought of peoples and of their political and social institutions. The study of geography consists no longer in memorizing lists of places and products, but in learning the influence of physiographic conditions on human activities and social development. Civics is no longer the study of the structure of government, national

or local, but of the way government functions in actual operation.

5. The great change in the status of the teacher. Society has come to look upon the teacher as its special agent in administering its most important function, education. This has resulted in the elevation of the vocation to the rank of a profession and in the demand for a careful preparation in the normal schools established by society to train teachers for the profession. The teachers in turn have responded admirably to the demands that society has imposed upon them. In no profession do so many organizations exist to promote the objects of the profession, and in no profession is there such literary and experimental activity.

b. *The Economic Aspect of the Social Motive.*—The industrial revolution bringing in its train the factory system of industry practically destroyed apprenticeship as a preparation for industrial life. The master no longer directly teaches an apprentice in whose welfare he has a personal interest. The apprentice in fact usually has but one process to learn, and that often requires little skill or intelligence. Because of the mobility of labor resulting from the crowding of people in the cities, there is no incentive to masters to teach apprentices, since the masters may not reap the benefit of the instruction themselves. And because of the capital required in the factory system, there is little hope that the apprentice may some day become a master, as he might hope to under the old domestic system of industry. Hence if industrial skill is to be secured and developed, an outside agency having some direct interest in its maintenance must undertake the task. Social developments in other directions indicate the school as that agency.

The chief problem that confronted the culture nations of the West during the first six decades of the nineteenth century was political, viz., the reconstruction or consolidation of the state. Germany, Italy, and the United States were engaged in working out the problem of national unity. France was trying to get rid of the shreds and tatters of monarchy. Even in England the energies of statesmen were largely devoted to such political problems as the extension of the suffrage and the disestablishment of the church. But once national consolidation was secured, it became evident to the statesmen of all nations that the power, influence, and even the existence of a nation depend upon its economic status. The growth in all these countries of great corporations and trusts which control industrial production on a large scale meant keen competition to supply international as well as domestic markets. Success would come to the nation whose industry was most efficiently organized; and that could be accomplished no longer by men with practical experience only, but men deliberately educated with that object in view.

Industrial Education.—This movement in favor of specialized education in industry came later in England and the United States than in Germany and France. England had nearly a century's start in industrial development, and a considerable control of foreign markets, and felt comparatively secure in her position. The United States had apparently unlimited natural resources and could afford to carry on wasteful forms of production. But Germany was a comparative newcomer in the industrial field and had neither England's plant nor America's resources, and she determined to rely upon specialization in all forms of industrial education, technical, commercial, and agricultural, for her national

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advancement. No community has ever deliberately rationalized its social life to such an extent as has Germany. In industry, education, civil administration, and war it has made efficiency the aim and has organized the training of its citizens with that object in view. In manufactures, not only technical schools for the higher education of managers and supervisors, but trade and continuation schools for training workers have everywhere been established. In commercial education, Germany is far superior to any other country and provides elementary and higher education for every form of business. Agriculture has not been neglected and elementary education in that vocation is provided. As a result of this highly specialized education Germany so rapidly advanced in every form of industry, in manufactures, commerce, mining, and administration, that she bade fair to secure the primacy in the markets of Asia, South America, and the undeveloped parts of the earth generally. England, France, and the United States have waked up to the need of similar specialized instruction, and in some forms of industrial education are now but slightly behind Germany. The industrial education movement has resulted in a change in the conception of training for citizenship. Preparation for intelligent participation in political rights and duties as the best way of making a valuable citizen is giving way to direct training in some form of industry to make the individual a productive economic unit. In other words the political aspect of the social motive in education is gradually yielding in importance to the economic; but both combine to make the preparation of the individual for successful participation in the political, industrial, and social activities of his fellow men the true aim of education.

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QUESTIONS, COMPARISONS, AND TOPICS FOR FURTHER STUDY

1. Is the Gary plan of employing older pupils to supervise the work of younger pupils related to the monitorial system of teaching?

2. Would the Sunday school of today be more efficient were it provided with paid teachers and a well-graded curriculum?

3. Should private philanthropy be relied upon to provide free meals, free eyeglasses, free clothing, etc., for indigent school children?

4. How great an obstacle is child labor to the realization of the educational ideal?

5. What are the chief obstacles to the successful enforcement of the compulsory education laws in the United States?

6. Only five per cent of the children in the United States who go to the elementary schools pass on to the higher schools. What explanation is there for this condition, and what measures may be adopted to increase the proportion?

7. What are the grounds upon which public support of higher education in the United States is attacked, and what are the grounds upon which it may be defended?

8. What are the advantages or disadvantages of the old apprenticeship system of industrial training over the present system?

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9. Is there any danger that the general introduction of industrial education in the United States will result in a caste system of education?

10. Do you approve of compulsory attendance of children from fourteen to sixteen years of age in evening continuation schools, as prevails in Germany? If you do, what should be the content of the work undertaken?

11. What changes in the education for citizenship provided for our own people would you suggest for newly arrived immigrants?

CHAPTER XVII

PRESENT TENDENCIES IN EDUCATION

Outline.—The social motive that dominates education at present has put an emphasis upon the content subjects as against the formal subjects of the curriculum. It also requires that educational sociology be added to educational psychology in the preparation of the teacher.

The social motive is shown in the emphasis given to vocational guidance and vocational education to enable the individual better to prepare himself for the work which by nature he is best fitted to do and thereby prevent the social "misfit."

The growth of public control of education has been accompanied by an increasing degree of secularization. This has brought to the front in the United States the problem of religious and moral training, which has disturbed educational circles in European countries for some time.

The modern conception of education demands that each child receive a training commensurate with his native capacities. Hence there is now greatly increased provision for the education of the feeble-minded, the blind, the deaf, and the crippled.

Never before has attention been so systematically directed to improved methods of teaching and of school organization. The Montessori method and the Gary system are but two of many such.

The use of scientific methods to discover the efficiency of school instruction and administration has led to the making of school "surveys" and the development of scales for measuring the results of instruction in a number of the elementary subjects.

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Educational extension in the forms of summer sessions, correspondence courses, medical inspection of school children, the "junior high school," and the larger use of the school plant gives evidence of the degree to which the school has been socialized.

The reconstruction of educational theory keeps pace with reforms in educational organization and methods. In the United States at the present time, Professors Dewey, Thorndike, and Judd, among others, are having a profound influence upon the thinking teachers and educators.

The social motive discussed in the last chapter is the dominant motive in education at the present time and will probably continue to be in the immediate future. The school is democracy's instrument for realizing its broad and humanitarian ideal, namely, so to organize society that the relations existing between individuals and classes in our institutional life may result in a greater degree of social justice. Until comparatively recently it was the psychological motive alone that dominated the school; the school organized its materials and practices in order to secure the development of the powers and capacities of the individual child that he might realize his own personality. This was the natural result of the emphasis upon individualism inaugurated by Rousseau and stressed by the educational reformers of the first half of the nineteenth century. It exalted psychology in the preparation of the teacher and made methodology the chief subject of instruction in the normal schools. But it is now recognized that personality can be realized only by participating in the varied activities of social life, and that social justice can be secured only by an accurate knowledge of the complicated structure of society. The social motive, therefore, demands that the materials and practices of the school be so

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organized as to make the school an introduction to and a preparation for social life. This has resulted in an emphasis upon the content subjects of the curriculum, as against the formal subjects. In the elementary school, as already stated, history, civics, geography, constructive and industrial work have superseded spelling, grammar, and arithmetic in importance. In the college the social humanities, such as history, politics, economics, and sociology are daily trenching upon the domain of the literary humanities. This has been due not only to the social changes that have resulted from the industrial and political revolutions that took place during the past century, but also to the change in our way of thinking that resulted from the general acceptance of the theory of evolution. The commonly accepted definition of education today is that it is the process of developing in the individual a power of adjustment to an ever changing social environment. Just as in the lower forms of life non-adaptation to natural environment means destruction, so with man non-adjustment to social environment means defeat and unhappiness. Hence the most important tendencies in the educational theory and the educational practice of the present day, altho some may appear chiefly psychological in character, have for their aim the better adjustment of the individual to society, so as to secure for him a greater degree of social justice and individual happiness. Space will permit us to consider only a few of the many movements that engage the attention of educators today.

Vocational Education and Vocational Guidance.—If social evolution is to be conscious and society is deliberately to rationalize its activities and organize itself to attain its ideal, the entrance of individuals into vocations regardless of fitness or of preparation must cease.

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Society is full of misfits leading unhappy lives and contributing little to social welfare because they are engaged in life activities which they entered by mere chance. The psychological aim of realizing the special powers and capacities of each individual and thereby securing a greater degree of personal happiness unites here with the sociological aim of adjusting the individual to a rapidly changing environment, and demands that opportunity be given to every child to "find himself" and to discover to his teachers in what kind of activity required by society he had best engage. This could not be done under the old bookish curriculum, which appealed to some children only and neglected large numbers who, being motor-minded, learn and find self-expression thru their hands. Moreover, the old curriculum was organized solely for children destined for business or the professions and neglected children who either by preference, fitness, or because of financial need would probably enter technical work or trades. The awakening to these anomalies has resulted in the introduction into the last two years of the elementary school of prevocational studies, to enable pupils and teachers, as a result of trial and experiment, to discover whether the pupil is to proceed in academic, commercial, or technical studies, and, in the last case, in which technical study or trade. The vocationalizing of education is not confined to the elementary school, but proceeds thruout the entire educational system. Colleges that are a part of a university now generally permit a student to elect as a senior the first-year subjects of the professional school, and in some instances to complete the purely collegiate work at the end of the sophomore year. In non-university colleges the "group" system of courses is frequently organized upon a vocational basis.

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Moral and Religious Education.—As we have seen, the growth of public control of education has been accompanied by an increasing degree of secularization. In France not only is religious instruction barred from the public schools, but all reference to the supernatural is forbidden. Direct moral instruction has replaced religious instruction, but there is a general feeling of dissatisfaction with the present condition of the problem. In Germany moral instruction is associated with dogmatic religious instruction. Every child is placed in one of three groups, Protestant, Catholic, or Jewish, according to the religious belief of his parents, and receives the religious instruction given to that group. The best opinion, however, seems to be that the results are unsatisfactory. In England the voluntary schools associate moral teaching with dogmatic religious instruction, usually of the Established Church, the board schools with non-sectarian religious teaching. The whole situation has been beclouded in England by the religious bitterness aroused by the competition between the two kinds of schools, and no one is satisfied with the results. In the United States religious teaching has generally been excluded from the public schools, and in some states even the reading of the Bible is considered a religious influence and therefore prohibited. Few would admit that we are an irreligious people because we do not give religious instruction in our public schools, but it is generally conceded that less reliance is placed today upon religious sanctions for moral standards and more reliance upon a rational basis for them. The need of an emphasis upon moral instruction is particularly pressing in a civilization where impersonal relations prevail to so large an extent as in ours. Where production is on a large scale and for a distant market, there exists a

temptation to engage in questionable business practices; where governmental machinery has become so complicated that officials are removed from the immediate scrutiny of the people, there is a tendency to laxity in administration; where people are crowded into large cities, there is a disregard for conventions that public opinion would not permit in smaller communities in which everybody knows everybody else. But despite the general recognition of the importance of the problem there is no general agreement as to its solution. Some educators believe moral training should be left to the home and the church, but the general opinion holds that solution to be inadequate. Some believe in specific instruction in ethics, others in the moral influence of a well-organized school and well-conducted instruction. That the American people are alive to the importance of the problem is attested by the attention it receives at educational conventions and by the establishment of associations, such as the Religious Education Association, to study the problem.

Education for Defective Children.—The modern conception of education demands that each child receive a training commensurate with his native capacities. To relieve society of a great financial burden by making defectives self-supporting, to develop in such children a feeling of personal worth, and to increase their individual happiness, specialized forms of education have been organized to conform to the needs of the various kinds of defective children. Remarkable progress has been made in the education of the *deaf*, in which the old “manual” method of communicating ideas by means of finger movements has been superseded by the “oral” method, by which the pupil is taught to read the movements of the lips and to employ his vocal organs in

speech. Provision is generally made in the school systems of large cities and in state institutions for the education of the *blind*. And this usually includes not only intellectual instruction thru raised letters but, as in the case of the deaf, of industrial training in some direction that will result in self-support. Probably the greatest advance has been made in the education of the *feeble-minded*. This movement is inseparably connected with the name of Edouard Séguin (1812-1880), who came from France to the United States for political reasons in 1850 and continued his experiments in the education of mental defectives. His methods were based upon the general principle of appealing to the mind thru manual work particularly, and sensory work generally, and he made use of such materials as wax, clay, wood, paper, pictures, and patterns. More recently there have been attempts in some places to introduce a considerable amount of formal intellectual instruction in the training of mental defectives, but with questionable success. Splendid progress has been made in the organization of tests, like the Binet-Simon tests, to discover the existence of feeble-mindedness; of clinics for the investigation of proper methods of teaching; and of "ungraded classes" in the elementary schools for specialized instruction. Open-air classes and schools for *anemic* and *tubercular* children give additional evidence of the modern desire to meet the specific needs of children that are not normal.

Experiments in Educational Method.—*Maria Montessori* (1870-).—Madame Montessori began her educational career as a teacher of mental defectives at Rome and had remarkable success in using and modifying the materials and practices of Séguin. It is questionable whether her methods have proved to be equally suitable

to normal children: to the present time she has applied it only to very young children and those of the first two grades of the elementary school. She holds with Rousseau that "nature is right"; she demands, therefore, complete liberty for the child, and considers the only education worth while to be "auto-education." In her school the general practice is to place the materials for education about the room. The child chooses whatever occupation interests him and continues to play or work at it without interference, unless he disturbs the other children in the room. This practice does give each pupil liberty to work independently on such material as he chooses, but the material is limited to a fixed number of things that must be handled in a certain way. It is a question whether her "didactic" apparatus, devised to train the senses and develop an ability to engage in practical activities, such as dressing oneself, is not more suited to teaching mental defectives than normal children. The games and occupations of Froebel, so valuable for the development of the imagination, feelings, and sense of social coöperation, are absent. Children do not work together at common pursuits; and the teacher, unlike the kindergartner, is an observer of the children's activities rather than a participant in them. Madame Montessori has had considerable success in working out methods to teach the three R's and particularly penmanship, in which the children show great speed and skill. Her method in reading, however, is applicable only to a phonetic language like Italian, and her method in arithmetic makes little advance upon the best modern practices. Tho she is inspired by the spirit of Rousseau and tho she has borrowed ideas from Pestalozzi and Froebel, her work lacks the social motive that dominates the education of today.

The Gary System.—Superintendent William Wirt of Gary, Indiana, has worked out during the past decade a *work-study-play system* of schools that has attracted the general attention of educators in the United States. In the ordinary city school all the children do the same thing at the same time. In the first period of the morning all the children meet in the auditorium for general exercises and at the close of the period they pass to their classrooms and the auditorium remains practically unused for the rest of the day. Each child in a classroom has a seat reserved for him, so that when the children of a class are in the auditorium or in the playground, the classroom is unused, and vice versa. In Gary the school is provided with shops, laboratories, playgrounds, gymnasiums, swimming pools, libraries, gardens, and auditoriums, in addition to the regular classrooms. All these activities are conducted at the same time, so that in any period, while some children are studying or reciting the ordinary school subjects in classrooms, others are working in the shops and laboratories, others are playing in the gymnasium or playgrounds, and still others are engaged in general exercises in the auditorium. This plan permits of an enriched and more varied curriculum for the children and a longer school day, tho more time need not be devoted to the formal school subjects. Moreover, it admits of double the number of pupils being housed in one school and has for that reason been seized upon as a means of solving the part-time problem which exists in most of the large cities, and as a means of saving expense. The plan has not yet been in operation long enough to enable us to judge whether the many administrative and pedagogic obstacles to its successful working in congested districts inhabited by fluctuating popula-

tions will permit the realization of the hopes of its adherents. But this remarkable organization is another illustration of the manner in which the social motive animates school policy today in its effort to meet the pressing needs of society. The Gary plan is only the most prominent of a number which are being tried out in various places in the United States but which lack of space forbids our discussing.

Statistical Methods and Scientific Surveys.—Until a decade ago practically no attempt had been made to measure the results of school instruction or school administration by the precise, objective, scientific methods that prevail in the natural sciences. Now quantitative measurements are being applied with success to many school activities. The use of statistical methods in gathering information has resulted in supplanting guesswork by intelligent prevision in administrative matters. Thru the careful collection and study of statistics much is being learned about such school phenomena as retardation, elimination, and fatigue. Educational “surveys,” based upon scientific methods to discover the efficiency of school systems, have been made in many cities and are likely to become part of the school machinery of both city and state. Professor Edward L. Thorndike, of Columbia University, has been a pioneer in the application of statistical methods to education and has not only maintained, upon psychological grounds, the possibility of devising scales for the measurement of the results of instruction, but has actually devised such for handwriting, arithmetic, and composition. Other investigators have organized similar scales in those subjects, and also for measuring achievement in spelling and drawing. In a great variety of ways it is being made evident that curricula, methods of teaching, and forms of

school organization and administration must justify themselves today upon rational grounds as socially efficient and not upon mere usage and tradition.

Educational Extension.—The social motive controlling education is evident in the great variety of methods adopted to reach all the people and serve their needs. Practically every large university has a summer session; these, grown to large proportions during the past decade, enable many people to satisfy their educational needs in the only way possible for them. Many universities have also university extension courses, some have correspondence courses, and the state universities in many instances have organized courses to meet the seasonal needs of people engaged in farming and other occupations. In secondary education we have such movements as the "junior high school," to combine the last two years of the elementary school with the first two of the high school, in order to prevent, if possible, the excessive elimination at the close of the elementary school period, as well as to give better opportunity for vocational guidance and vocational education. Medical inspection of pupils and better sanitary regulations in school buildings show the influence of the school hygiene movement. Finally, to close with but one other illustration, the movement in favor of a greater use of the school plant has had remarkable success in making the school a community and social center, in which the people of the neighborhood may not only receive instruction through public lectures and political debates, but may secure healthful recreation in the form of dances, quiet games, and moving-picture entertainments. The school has been socialized.

Reconstructing Educational Theory.—*John Dewey* (1859-).—The greatest advances in the development of

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educational theory since the twentieth century opened have been made in the United States, and the leader in its reconstruction is Professor John Dewey of Columbia University. Professor Dewey is a distinguished scholar in the fields of philosophy and general psychology, but has made his most important contributions in connection with the social aspect of psychology. He organized and administered an experimental elementary school at the University of Chicago from 1896 to 1903, and his educational theory is to a great extent the result of his application to that school of the principles he worked out in social psychology. His fundamental premise is that "the school cannot be a preparation for life except as it reproduces the typical conditions of social life." The typical conditions of social life are determined by the industrial activities in which people engage; hence industrial activities should have an important place in the school curriculum. Weaving, sewing, cooking, and shopwork served in his school as the introduction to other industrial activities, all of which received a historical study. In this way the social participation provided by Froebel's kindergarten was supplied, and motor expression, which was the other chief characteristic of the kindergarten, received a freer development in Dewey's school, as his industrial activities did not become so formal and stereotyped as Froebel's "occupations." Instruction in the formal studies, such as reading, writing, and arithmetic, were connected with the children's industrial activities, so that these subjects do not appear unconnected with everyday experience. A fine training in oral expression was given, because the industrial activities provided the children with experiences that they wanted to talk about and also an audience that wanted to hear them. The gospel of training thru

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industrial occupations by making them the basis of a study of social relations is attractively set forth by Professor Dewey in his little book "School and Society." His "Schools of To-morrow," which has recently appeared, and which describes the most important experiments in elementary education taking place in the United States at the present time, emphasizes the principle of preparation for social living as the aim of the school and the need of reconstruction in school organization, instruction, and curricula to realize that aim.

Professor Dewey has made also an important contribution to educational method in his books "How We Think" and "Interest and Effort in Education," namely, the "problem method" of teaching, of which one well-known educator says, "Its active acceptance by teachers would bring about a complete transformation of classroom method." From the time of Aristotle educators have thought of induction and deduction as including the entire intellectual process, at least so far as teachers need give it attention. Professor Dewey has pointed out that these are the thought-processes only of one who has already thru experience mastered the subject matter of his field, and that by far the greater part of our intellectual process is antecedent to this stage. We must, therefore, study these antecedent processes by which the mind of the individual comes into relation with the objective world, and find in them the methods for the greater part of our teaching. Professor Dewey finds the characteristic feature of them to be "interest," by which he means a more or less conscious and partly instinctive desire of the individual to attain some end. But interest is to be considered only a stimulus to the higher intellectual processes, into harmony with whose workings the teacher

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must bring his schoolwork. He especially cautions us that the reaction against the attempt of centuries to apply Aristotelian methods to inexperienced minds, if not guided by such an understanding, will result in a conception of interest as mere temporary attention or momentary stimulation, and thus in failure to introduce any intellectual elements in education.

Contemporary educational theory also owes much to the advocates of the "new psychology" who have not, perhaps, been so much influenced by the social motive as has Professor Dewey. Probably no recent book has had more influence upon the thinking of teachers and educators than the "Talks to Teachers on Psychology" of the late William James (1842-1910). His emphasis upon the biological point of view in psychology—that man is primarily a behaving organism—had as an educational corollary the emphasis upon learning thru doing, already introduced into education by Froebel. But one inference made by many teachers from the emphasis on behavior as the fundamental factor in education has drawn forth a warning from such distinguished psychologists as Professor E. L. Thorndike of Columbia, and Professor C. H. Judd of the University of Chicago. The inference referred to is that motor-expression in the more direct forms which find fulfillment in constructive work, dramatization, and manual training should have primacy in the curriculum. These psychologists point out that whatever thought man has ever had he has expressed in speech, and that no form of motor-expression compares in importance with speech. Thinking and speaking differentiate man from the lower animals and determine the way in which he adjusts himself to his environment. Developing the thought processes which translate sensory stimuli into

motor responses and training in language expression must not be subordinated, therefore, to the manual activities. All have their place in a socialized curriculum which aims at preparing the individual to engage in industrial, political, and social activities with his fellow men.

Another psychologist who has had a profound influence upon education in the United States is G. Stanley Hall, president of Clarke University. Dr. Hall's "Adolescence," published in 1904, at once assumed a place of authority in the literature devoted to the education of youth and not only aroused interest in the problems of secondary education but stimulated experimentation in their solution.

The Eternal Problem: Harmonizing the Individual and Society.—In the introduction to this book the statement was made that the great problem before every society, at all times and in all places, whether that society be in a primitive or in an advanced stage of development, is how to organize itself so that the individual shall have the freedom necessary to realize his own personality thru attaining his own ends and yet not endanger the stability and existence of society itself. Society is organized on institutions, and education must prepare the individual for life under institutions. The danger always exists, however, that the institution may be considered as an end in itself, instead of as a means for the advancement of the welfare and happiness of the individual. We have seen how during the Middle Ages the individual was submerged in institutional control and had no rights apart from membership in some institution, such as church, gild, castle, or university. Then came the Renaissance with its demand for the right of the individual to control his own destinies untrammelled

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by tradition and authority. The unwillingness of institutions to modify themselves either in response to this demand or to changed social conditions resulted in a period of conflict, which terminated only in the French Revolution with individualism triumphant. For almost a century afterward, in political and educational thought, progress was considered only in terms of the individual. Costly experience and also the truer conception of progress resulting from the general acceptance of the doctrine of evolution have combined to harmonize the conflicting views. It is true that the twentieth century has so far emphasized social control, but only that thereby every individual may better develop his native powers and capacities and attain to his greatest usefulness and happiness.

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QUESTIONS, COMPARISONS, AND TOPICS FOR FURTHER STUDY

1. Criticize the following as the aim of education: to give culture, to discipline the mind, to enable one to earn a living.

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2. What changes can you mention that must be made in school organization and instruction to permit of an efficient use of vocational guidance?

3. The Gary plan permits children to repair to the neighboring church for a period of religious and moral instruction. Do you approve of that system? If not, what do you suggest in its stead to secure religious or moral instruction?

4. Do the benefits of permitting mentally deficient children to attend school with normal children outweigh the disadvantages, or should all the feeble-minded be placed in special institutions?

5. Compare the conception of "liberty" as illustrated in the Montessori system with that in the Froebel system. How could the two systems be united to secure a better training in early childhood?

6. What danger exists in the introduction of "efficiency" methods in school instruction and administration?

7. What changes are necessary to make the rural school a neighborhood center for the general education and recreation of the people?

8. In the early nineteenth century the minister was the most influential factor in the village and moral community. How can the teacher be made such today?

9. Show in what respects John Dewey has been influenced by Rousseau.

10. Does the education of today emphasize service to society as much as it emphasizes the rights of the individual?

11. What value do athletics possess as a means of moral education? What do the social activities and social organizations of the school?

PART V

NATIONAL SYSTEMS OF EDUCATION



CHAPTER XVIII

THE DEVELOPMENT OF NATIONAL SYSTEMS OF EDUCATION

Outline.—A. The United States. Education in the United States has passed thru four periods: (1) The period of colonial education in which religion was the dominant motive. The *selective* type of education prevailed in the southern colonies; the *parochial school* type in the middle colonies; and the *town school* type in New England. (2) The transition period from the Revolution to the public school revival. In this period there existed definite obstacles to the development of public education and important movements stimulating it. (3) The period of the public school revival (1837-1876), in which, largely as the result of the work of such leaders as Horace Mann and Henry Barnard, there was developed in all states a public educational system of varying extent and strength. (4) The period of educational expansion. This period is characterized by an increasing centralization of state control and a great extension of educational facilities.

B. Germany. Frederick the Great laid the real foundation for the present Prussian system of education in his General School Regulations of 1763. During the reign of his successor, the General Code of Prussian law was adopted in 1794, which proclaimed unequivocally the supremacy of the state in education. The next great step in advance was taken after the battle of Jena in 1806, when reforms affecting every branch of education were adopted and the University of Berlin was founded. Tho the years 1818-1860 formed a period of reaction politically, the schools were finally separated from Church control and full state control was established. The

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period since 1871 has been one of intense nationalism in which the school has become the chief agency of the state to work out its views of political and economic life. Organization of the German system.

C. France. Tho the Revolutionary Convention gave a great deal of attention to the establishment of a national and lay system of education, little was really accomplished in the revolutionary period except the reorganization of secondary and higher education by Napoleon in 1802-1806. Elementary education fell under the control of the church after the Revolution in 1815 and remained so until the passage of Guizot's Law in 1833. That was the real foundation of the French system of elementary education. The Second Empire, however, was favorable to religious control of elementary schools, with the result that the Third Republic had not only to recover lost ground, but was compelled to enter into a conflict with the Church for the control of education, which finally resulted in its complete secularization in 1904. France has today the most completely centralized system of state-controlled and state-supported schools in western Europe. Organization of the French system of education.

D. England. England relied upon philanthropy to do the work of the state in education longer than any of the other great nations of the West. The first step towards state support was taken in 1833, when a parliamentary grant of money was made to the schools of the two great religious educational societies. From that time until 1870 those two societies remained the media for the distribution of state grants. In that year, a system of "board" schools was established to be organized, supported, and controlled by the state, which, however, continued its grants to the religious "voluntary" schools. Because of the remarkable growth of the board schools, the conservative party in 1902 secured the passage of an act favoring the voluntary schools but placing all schools under the supervision of public officials, and education in England is now organized under the law of 1902. Description of its organization.

THE UNITED STATES

In the case of the United States we shall have to go back farther in time than with the European countries, especially because a knowledge of the development of education in the United States in the nineteenth century cannot be obtained without a previous understanding of the peculiar social conditions that obtained during the colonial period.

I. Colonial Education

The Predominance of the Religious Motive.—We saw in Chapter IX that the Reformation principle, that the individual should be guided in life by the Bible, had as an educational corollary that he should at least be taught to read it. We saw also that where the Reformation was chiefly a religious movement and was carried to logical conclusions, the effect upon the development of universal education was direct; but that where the Reformation was political and ecclesiastical rather than religious, and halting rather than thoro, the attitude towards education was one of comparative indifference and neglect. The former condition was true wherever Calvinism prevailed, as in the Netherlands, Scotland, and among the Puritans in England; the latter condition was true in England generally, where the Anglican church was in the nature of a compromise. The United States was settled in the seventeenth century, when religious antagonisms were most bitter; and it was settled largely by groups of people who fled from Europe because of religious persecution and because of their desire to worship in their own peculiar way. The kind of educational system that would be established in

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any part of the new land would be determined chiefly by the kind of religious opinions held by the people settling there. And, as Professor Graves has pointed out, we do find three fairly distinct types of education developing in the colonies.

a. *The Selective Type* prevailed in the southern colonies generally, of which Virginia is fairly typical. In none of the colonies were the social conditions of the mother country so reproduced as in Virginia, where distinctions of classes developed and the Anglican Church was established. The gentry employed tutors for their own children or sent them to England for instruction. They not only were not interested in the education of the masses, who were in many instances indentured servants and convicts, but they believed solely in the system of apprenticeship as preparation for the trades which were to be the life work of these lower classes. Here and there secondary schools were established by individuals or voluntary associations, but neither the Church nor the colonial government took a direct interest in the organization of any system of education. In 1692 the College of William and Mary was founded, with a splendid endowment and equipment for those days; and during the eighteenth century it rendered admirable service to the colony in the equipment of leaders in all the higher walks of life. But down to the Revolution the character that was impressed upon education in Virginia in the seventeenth century remained, i. e., good provision for higher education, fair provision for secondary instruction thru the voluntary and haphazard establishment of Latin schools, and little provision for elementary training beyond the system of apprenticeship. A few elementary schools were established, but where they were for the common people they were

called "poor schools." And what is true of Virginia is true generally of the other southern colonies. Wherever there was any attempt to establish public schools, it was associated with settlements of Scotch-Irish Presbyterians or other dissenters, as in North Carolina.

b. *The Parochial School Type* prevailed in the middle colonies. These colonies were settled chiefly by various Calvinistic sects, such as the Dutch Reformed in New York and the Presbyterians in New Jersey, or by other sects of the advanced Protestant type, as the Quakers and Mennonites of Pennsylvania. They all believed in the need of everyone reading the Bible, and all, therefore, favored elementary education. But as each sect denied the value of the tenets of the others to effect salvation, this elementary education took the form of parish schools attached to the churches. The Dutch transplanted to New Netherlands the excellent system of parochial schools that prevailed at home, and some attention was given also to secondary education; but after the English occupation in 1674 the same haphazard attitude towards education was adopted that prevailed in the southern colonies. Pennsylvania retained its parochial system thruout the colonial period, but sectarian jealousy prevented anything like uniformity developing. The Quakers, Moravians, and Presbyterians also maintained "grammar" schools for secondary education in that colony. In New Jersey and Delaware, tho parochial schools existed, they were established in a still more haphazard manner than in New York and Pennsylvania. With the founding of King's College (now Columbia University), the Academy of Pennsylvania (now the University of Pennsylvania), and Princeton, the middle colonies at the time of the Revolution were far better provided with elementary, secondary,

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and higher education than were the southern colonies.

c. *The Town School* prevailed in New England; those of Massachusetts may be taken as typical. The people who founded the colony of Massachusetts were a homogeneous group. There was very little distinction of classes among them as prevailed in the southern colonies, and no distinction of sects as there was in the middle colonies. They were mostly of the middle class socially, were generally well-educated and had university graduates for leaders, were thoro believers in democratic government, and were strong upholders of the Calvinistic-Genevan principle of the "church-state" form of government. Holding firmly to the necessity of everyone's being able to read the Bible, the General Court, i. e., the legislature, passed the famous Law of 1647, by which "the Puritan government of Massachusetts rendered probably its greatest service to the future." Schools had been founded in some of the towns previous to 1647, but by voluntary efforts. The Law of 1647 provided that every town that contained fifty families should maintain an elementary school whose teacher should be paid partly from tuition fees and partly from taxation. If a town had one hundred families it must maintain in addition a "grammar" school to fit the youth for the university. A town that neglected to conform to the provisions of the law was to be fined £5—at the beginning of the eighteenth century the fine was increased to £20. The religious motive that prompted the law is stated in the preamble, namely, to thwart the "one chief project of that old deluder, Satan, to keep men from a knowledge of the Scriptures." The Church imposed the law thru its instrument, the state, but the law continued to be the ideal of the state after the school had been completely secularized. The Massachusetts

type of school was adopted in all the other New England colonies except Rhode Island, where the fanatical devotion to freedom of thought and of speech resulted in a random growth of schools such as characterized the southern colonies.

Unfortunately subsequent developments resulted in the decline of education in New England and the degeneration of the town school: (1) With the establishment of the Commonwealth in England migration of Puritans to New England practically ceased; and when the fine university scholars who had been the early leaders died off, there were no such lovers of learning to replace them. (2) There was a growth of liberalism both in the colonies and in the mother country, as evidenced, for instance, in the Toleration Act passed by Parliament in 1690. Before the opening of the eighteenth century the unity of religious belief that had characterized Massachusetts and New England generally gave way to divergence of belief and toleration of other sects. With the decline of the intense religious spirit there was a corresponding decline in the education that had been inspired by it. (3) The chief causes of the decline of the town school were the spread of population into unsettled regions and the attainment of local government by districts within the town. The houses of the early settlers were clustered around the meetinghouse, partly for better protection against Indians and partly because of religious devotion. As these two incentives gradually passed away, settlers moved into parts of the town from which the town school was inaccessible, or they moved into entirely new regions that had no town center. The new hamlets that then arose demanded equality of opportunity to attend school for their children. This resulted at first in the "moving" school, i. e.,

the entire town supported a teacher, but instead of being maintained permanently in one place to which all children went, he moved to several places for a few months each. The last step in the decline of the public school in New England took place when each district within the town established its "district" school. The "moving" school had at least a good teacher with fair pay, who taught thruout the year; but the district school could afford only a poor teacher, who "kept" school in each district a few months in the year. Hence the Revolution found New England provided with far poorer facilities for elementary education than had existed a century before. There had also been a gradual decline in the "grammar" school, which furnished secondary instruction; but Harvard, Yale, Dartmouth, and Brown supplied the higher education needed by the members of the learned professions.

II. The Transition Period. From the Revolution to the Public School Revival.

From a material standpoint the Revolution had an evil effect upon the growth of public education in the United States; from a spiritual standpoint it had a beneficent effect. The war bankrupted not only the central government but many of the state governments. The British troops ravaged the country from New England to Georgia, and the British fleet destroyed colonial commerce. Industry was at a standstill, and many people were reduced to poverty. War is essentially destructive and usually diverts attention from constructive human activities like education, and in hard times education is generally one of the human activities that is first to suffer. But the principles of liberty and equality, for

which the war was fought, combined with the growth of a new political and social order to develop a belief in the need of universal education to achieve those principles and that order. This movement in favor of public education had a number of difficult obstacles to overcome but was hastened by a number of subsidiary movements. We shall first consider the obstacles.

A. Obstacles to the Development of Public Education.

—1. *The Practice of Granting Public Moneys to Private Schools.*—Tho this practice was general, its effect is best shown in connection with the academy movement in New England and the Free School Society movement in New York City.

As already stated, one of the results of the development of the district school system in New England was the disappearance of the "grammar" school, which had provided secondary education. The increase in the cost of supporting several district elementary schools in a town reduced the town's financial capacity to maintain any secondary school. This difficulty, which had existed before the Revolution, was increased by the poverty resulting from the Revolution. But the well-to-do classes would not let their children go without secondary instruction, and the policy was inaugurated of establishing private secondary schools called "academies." Tho these academies were private corporations, thru the influence of their supporters they were usually able to receive subsidies of public moneys either from the state government or from the towns. They performed a splendid service, for they were generally well organized and administered, were responsive to the needs of their constituents, introduced modern subjects like English literature and science, which in turn influenced col-

lege curricula, and thru their demand for well-equipped teachers helped to hasten the advent of the normal schools. But they were pay schools and hence not open to the children of the masses; they withdrew the attention of the well-to-do and public-spirited from public education just when it was most needed there; and they created vested interests which were often opposed to public interests. When one considers that by 1840 Massachusetts alone had fifty such private academies subsidized with public funds and that the movement had spread thruout the country, one can realize the extent to which they were an obstacle to the growth of public secondary schools.

The Free School Society of New York City was organized in 1805 by a body of philanthropists headed by De Witt Clinton, to establish schools for children who did not attend either the church or the private schools which then provided the very inadequate school facilities of the city. The Society prospered from the very beginning, sharing in the state school fund that had been established and receiving grants of money from the city government. In 1826 it secured a new charter from the state, changing its name to the Public School Society of New York and granting it permission to charge a fee for children whose parents could afford it. The great service it was rendering was at once made evident, for the attendance at its schools immediately fell off because many parents "were too poor to pay and too proud to confess their poverty." The system was abolished after a few years of trial, and the schools again made free to all; but the name Public School Society was retained as less suggestive of pauperism. A local tax for the support of schools was authorized by the state legislature in 1828, the proceeds of which were

granted to the Society. It maintained its prosperous career, continued to found schools, and seemed to be thoroly intrenched in its control of elementary education. Fortunately for the cause of public education, the Society had aroused the suspicion and animosity of several of the religious sects which repeatedly demanded of the City Council the right of their schools to share in the public school funds. The City Council refused to meet these demands, and in 1842 the Catholics took the fight to the legislature on the ground that the non-sectarian instruction given in the schools of the Society was really Protestant. As a result of the legislative hearings it became evident that the public welfare would not best be served either by continuing to grant the school funds to a private corporation or by dividing them among warring religious sects. The legislature, therefore, in 1842 established a Board of Education for New York City, to be elected by the people and to control the use of the school funds, no portion of which was to be given to a sectarian school. Thus was established New York City's system of public elementary schools.

2. *Sectarian Religious Jealousy*.—The second obstacle to the development of public education was sectarian religious jealousy. The work of the Public School Society of New York was imitated by similar societies in other cities, such as Philadelphia, tho not with the same degree of success: their efforts did not usually have the beneficial effect upon the development of public education seen in New York City. Far more typical was the experience of Pennsylvania. Some of the most progressive leaders in Pennsylvania after the Revolution worked for the establishment of public elementary education, but in vain. The generally accepted opinion was that

elementary education should be provided by the churches. Quakers, Lutherans, Mennonites, and Reformed all opposed a movement which would prevent the teaching of their own peculiar forms of religion and which would also render valueless the school property that they had accumulated. The result was that the best the reformers could do was to secure legislation, in 1802, to provide for the payment to private schools of public moneys raised by local taxation, for the instruction of children whose parents were too poor to pay. Tho this law was modified to allow certain localities, like Philadelphia, to establish "pauper" schools for children of poor parents instead of paying for them in private schools, it remained the law for the whole state until 1834. In that year the Pennsylvania Society for the Promotion of Public Schools secured after seven years of agitation the passage of a law permitting townships and boroughs to constitute themselves into school districts to levy school taxes for common schools and thereby to share in the state common school fund which had been established. Sectarian opposition was so strong in "old," i. e., eastern, Pennsylvania that over one-half of the school districts of the whole state either voted against levying the tax or took no action. A strong fight was made in the following year to secure the repeal of the law, but, largely because of the vigorous support given to the law by the people of the northern and western counties inhabited by New Englanders and Scotch-Irish Presbyterian colonists, the attempt failed. Sectarian opposition delayed in a similar manner the establishment of a public school system in New Jersey and Delaware.

3. *The Idea of Public Education as Pauper Education.*—A third obstacle to the development of public

education was the prevalence of the idea of public education as pauper education. The delay in the establishment of common schools in Pennsylvania, tho chiefly due to sectarian opposition, was strengthened by the dislike of poor parents of sending their children as paupers either to private schools or to public "pauper" schools. And the idea that public education meant pauper education prevailed generally thruout the country south of New England. How great an obstacle to the spread of public schools this idea was, may, perhaps, best be illustrated from the history of education in the South. We have seen that in the South generally very little interest in the establishment of common elementary schools had been shown by the influential classes before the Revolution. Thomas Jefferson was the chief adherent of the public school; even during the war he introduced a bill into the legislature to establish a system of public education extending from the elementary school thru the college. This was, of course, far in advance of the times, but Jefferson was able to stimulate sufficient interest to secure the passage of a law in 1796 to permit the justices of each community to establish public schools by local taxation. Nothing was accomplished, however, until in 1810 the legislature established a "literary fund" for the support of public education. The considerable amount of money accumulated in this fund was devoted chiefly to the establishment of the University of Virginia in 1820, tho \$45,000 was appropriated in 1818 to subsidize schools for the instruction of poor children. These actions will illustrate the general attitude toward the educational problem on the part of the influential classes. Jefferson advocated the public schools as an institution for training in citizenship. What eventuated was a form of poor relief.

Nevertheless the system of "poor" schools that came to be established from the proceeds of the literary fund, while wholly inadequate, did familiarize the minds of the people with the idea of public support of elementary schools. The same social discrimination against the public school as a pauper institution prevailed in varying degrees in the other southern states. But thru the establishment of literary funds to subsidize schools for the poor and the passage of permissive laws to establish common schools, some progress had been made by the time of Horace Mann. In fact, in nearly all the large cities of the South regular systems of public schools had been established.

4. *The Existence of the District Schools.*—A fourth obstacle to the development of public education was the existence of the district school. We have already seen that by the time of the Revolution the town school in New England had gradually given way to the district school. The latter was at first something in the nature of a convenience developed by local necessity, but it gradually acquired legal existence. The school district was given power to levy local taxes and to enforce contracts, and finally, in 1827, to elect a school committeeman to take charge of the school property and to employ the teacher. The result was that everything connected with the school, the selection of the site, the choice of the committeeman, the appointment of the teacher, became a matter of political strife, in which sectarian antagonisms and petty private interests prevailed. Poor schools with inefficient teachers, open for but a few months of the year, were the natural consequence. However, there were not lacking men who perceived the evils of the district school system, and a vigorous campaign was carried on in the press and on

the platform for their betterment. The most influential advocate of reform was James G. Carter (1795-1849), who as a member of the Massachusetts legislature secured the passage of several acts which were the real beginning of the public school revival. In 1826 every town was required to choose a school committee to supervise the schools of the town, select textbooks, and certify teachers, tho the district committeeman could still appoint a teacher. In 1834 a state school fund was established, in which a town could share on condition that it raise by tax a dollar for each child of school age. Carter's efforts culminated in 1837 in the passage of a bill for the establishment of a State Board of Education to consist of eight members. It was to have no executive powers, but was to collect information upon school affairs and recommend changes to the legislature. Horace Mann was elected its first secretary, and with his name is associated the reform of the district school.

5. *The Claim That the Public School Was Based upon an Undemocratic Principle.*—A fifth obstacle to the development of public education was the claim that the public school was based upon an undemocratic principle. In all the sections of the country that we have thus far discussed many wealthy persons were found in the first ranks of the reformers who demanded free schools for all, supported and controlled by public agencies. But the selfish propertied classes everywhere bolstered their opposition to public support upon the ground that it was both undemocratic and unjust to compel people without children to pay for a service from which they received no benefit. That this should be true in the older states of the East is not so surprising; but it held true also in the newer states west of the Alle-

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ghanies, and delayed the development of public schools there.

Immigration from the older states westward followed parallels of latitude, and the social and educational ideals that prevailed in the new states were determined by the place of origin of the settlers. The attitude of indifference that prevailed in the old southern states was carried, with diminished force it is true, into the new states south of the Ohio River. The territory north of the Ohio was claimed in part by older states both of the North and South. Its southern regions were settled largely by people from the southern states and its northern portion by people from New England and New York. All the states that made claim to part of this territory finally ceded their claims to the federal government and the territory was organized under the famous Ordinance of 1787. In accordance with the provisions of this act the entire territory was divided into townships six miles square, and of the thirty-six sections into which each town was subdivided, section sixteen was reserved for the support of public schools. Moreover, by a later act two or three whole townships were reserved for the support of a state university. This admirable policy was continued in all the federal territory which was afterwards secured by the United States thru purchase or conquest and sold to the residents of the states created out of it.

It is obvious that a firm foundation was thereby provided for a system of public education. One might assume that, buttressed by the new social system that arose in the West, in which personal worth counted for more than social influence and the demand for "a free field and no favor" was the most popular maxim, this policy would have brought immediate results. But people's at-

tention was almost exclusively devoted to founding a home in a wild and unsettled country, where no facilities for transportation and communication existed. The successful man was not the man of "book learning," who was viewed rather with disdain; but the strong man of shrewd judgment who could hew his way to the top, and who often did not see why his success should be penalized by taxation in favor of the less successful. This view, strengthened by other unfavorable influences, such as the sectarian jealousies brought by the settlers to their new homes, resulted in the halting advance of public education which is associated with subsidies to private schools for the instruction of poor children and "permissive" legislation for the establishment of public schools. In 1824 an act was passed in Indiana permitting townships to elect school trustees to control the schools that might be established. It was ineffective because few schools were established. In 1831 another act permitted the voters of the school districts into which townships were divided to decide the amount of local tax to be levied for the support of public schools. But the act contained the proviso that "no person should be liable for tax who does not, or does not wish to participate in the benefit of the school fund." Altho additional school legislation was made before 1840 in Indiana, it did not result in the establishment of a public school system. This was also true of Illinois; but Ohio and Michigan, the other two states carved from the Northwest Territory, succeeded in establishing a complete system, with a state superintendent to supervise it, in 1836 and 1837, respectively.

B. Movements Stimulating the Development of Public Education.—As these movements were nearly all philanthropic in character they have been discussed in Chapter

XVI, and it remains only briefly to explain their influence in stimulating the development of the public school system of the United States.

1. *The Sunday School Movement.*—It must be remembered that as first organized the Sunday school was not a church institution but was organized to educate the poor, the ignorant, and the vicious, and that in it were taught secular as well as religious subjects. It is true that the secular Sunday schools stimulated the churches to action, and that the Sunday school soon fell almost exclusively under church control and gave up secular instruction. But it became an institution for all children instead of for the poor and ignorant only, and was a step in the direction of accustoming people to think of secular education for all.

2. *The Monitorial System.*—So slight was the provision for free education in most parts of the United States when Lancaster's system of monitorial teaching was introduced in 1806, that cheap instruction was absolutely essential to the introduction of any system of public education. The monitorial system was just what was needed. As late as 1834, in Philadelphia, there was but one teacher to two hundred and eighteen pupils and the cost per pupil never rose above \$5.00 per annum. The cheapness of the system had a great influence in securing appropriations from legislatures for the establishment of public schools. Moreover, the enthusiasm of its advocates awakened thought and provoked discussion on the question of education in all its aspects. And the model schools which were established for the preparation of teachers prepared the way for the normal schools which had so much to do with the improvement of public education in the United States.

3. *The Infant School Movement.*—This movement is

responsible for the organization of primary education in the United States, which up to the time of the spread of the movement had been sadly neglected. It came at an opportune time, when opposition to the monitorial system had begun to develop upon pedagogical grounds and the demand that small group work supersede mass instruction became pronounced. The infant school was also instrumental in introducing Pestalozzian methods into elementary education and developing a preference for female teachers for younger pupils. At first the infant school was entirely distinct from the elementary school, but when both were taken over from philanthropic agencies by the public authorities, the infant school became the primary department of the elementary school.

4. *Foreign Influences Favorable to the Spread of Public Education.*—The discussions and resolutions in the French Revolutionary Assembly in favor of public elementary education had a direct effect upon some leaders of thought in the United States, notably Jefferson. But far more influential were the numerous official and unofficial reports of the Prussian and other German systems of state education, that were published in the United States between 1820 and 1840. Some of these reports were reprinted for distribution by several states. Moreover, the great mass of intelligent Germans who emigrated to the United States after the Revolution of 1848 were imbued with the idea of school systems supported and controlled by the state, and they became centers of influence in favor of the establishment of public systems in the communities where they settled.

5. *Results of the Interplay of These Opposing Influences.*—When the Revolution was over, the educational ideals and institutions that had been transplanted

from Europe in the Colonial period still prevailed outside of New England. Until the end of the transition period, about 1840, the obstacles that have been discussed in this section had been sufficiently strong to prevent the establishment, except in a few states, of a general system of public education. But the growing spirit of democracy everywhere, combined with the necessity of meeting the demands of a new environment, brought about a great change in ideals and considerable change in institutions. Everywhere education was becoming less aristocratic and sectarian, more democratic and secular. But despite that fact and despite the influence of the movements that we have just discussed, which so strongly assisted in the development of a public school system, that hoped-for end came only as the result of a great awakening, to which we must now direct our attention.

III. The Public School Revival (1837-1876)

The movement known as the "public school revival" began with an attempt to arouse interest in the reform of the existing common schools, and eventuated in all states in a public educational system providing free elementary and secondary education, and in many states higher education also. The revival was well launched by 1840 and had in general accomplished its aim by the close of the Reconstruction period in 1876, except in the southern states. There, tho the principle upon which it was based had been adopted, its realization was delayed by the deplorable conditions resulting from the Civil War. The movement can best be understood by a study of the career of a few of its great leaders, and the one first to be considered is Horace Mann.

Horace Mann (1796-1859).—Horace Mann was born in western Massachusetts of poor parents who could give him no education beyond that of the neighboring district school; but almost wholly by his own efforts he was able to graduate from Brown University and afterwards to enter the legal profession, of which he became a distinguished member in Boston. He was deeply interested in practically every contemporaneous movement for social welfare, was singularly unselfish in character, and was possessed of the sound judgment that is usually associated with wide experience. All these traits were needed by the man who was to be the first secretary to the new State Board of Education, which was established by Massachusetts in 1837. For the board had no real powers; and its permanence, influence, and success depended almost wholly upon the character, intelligence, and ability of its secretary. The work accomplished during the twelve years of his incumbency of that office (1837-1849) proved the wisdom of the choice of Mr. Mann.

Mr. Mann understood that his first great task was to arouse a new public spirit, to change the apathy and indifference of the people towards the common schools into active enthusiasm. To do this he collected information in every possible way concerning the wretched condition of the district schools in the United States, and concerning improved methods and systems elsewhere which might serve as models. With this information at his disposal, he adopted three methods of educating the people of Massachusetts: (1) he made tours of the entire state, holding public meetings at which he explained the need of improvement and the means whereby it might be realized; (2) he issued his famous *Annual Reports*, which treat of practically every educational

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problem of interest at the time and which were read extensively not only in Massachusetts but in many other states; (3) he published the *Common School Journal* to spread information periodically concerning the work of the Board of Education, the evil conditions found, and the ways best calculated to overcome them.

As a result of this campaign of education, carried on at the expense of his health and financial resources, Mr. Mann was able to secure reforms in the public educational systems of Massachusetts which are little less than astonishing in their extent and value. Among these reforms the following are important: (1) The establishment of three public normal schools in different parts of the state for the proper training of teachers. These were highly successful from the start and had a great influence in elevating the teaching vocation in public esteem. (2) The addition of a full month to the average school year and the remarkable increase in attendance of pupils in the elementary school. (3) The gradual substitution of the public high school for the private academy. Before the close of his tenure of the office of secretary, fifty new high schools had been established. (4) The growth of appropriations for public education, which were more than doubled during his régime. The ratio of private school expenditures to those of the public schools was decreased from seventy-five to thirty-six per cent. (5) The increase in compensation for teachers, which, in the case of men, was sixty-two per cent, and of women, fifty-one per cent, tho the number of women teachers had more than doubled. (6) The adoption of new agencies for increasing the efficiency of teachers, such as teachers' institutes and school libraries. (7) The adoption of new methods of teaching, especially Pestalozzian object lessons and

oral instruction, and of milder discipline based upon an understanding of child nature.

These admirable reforms were not secured, however, without bitter opposition, especially from two sources: the conservative schoolmasters, and the sectarian religious interests. Mr. Mann's *Seventh Annual Report* (1843) was the one which gave particular offense to the unprogressive teachers; it brought about a storm of controversy. It gave an account of his visit to foreign schools during the previous year and was full of praise for what he saw in the Prussian schools, where real instruction was given by teachers instead of the mere hearing of recitations from books, where the arousing of interest was relied upon to secure attention instead of the giving of punishment, and where teachers were filled with the spirit of enthusiasm instead of dull routine. The *Report* did not mention the Boston schools, but the conservative teachers of Boston felt themselves attacked and made a savage reply. The attention that was drawn by the controversy to the reforms advocated by Mr. Mann hastened their adoption.

The assaults of the sectarians were more difficult to repel, because they were more vague. Mr. Mann was a Unitarian, and he was accused of causing the disappearance of religion and the religious spirit from the schools. Tho this appeal to religious prejudice was not successful and the attempt to secure the abolition of the State Board of Education failed, the controversies in which he had to engage wore Mr. Mann out and he resigned in 1849. But the controversies served to spread a knowledge of his reforms thruout the country and added greatly to his reputation. He afterwards became president of Antioch College, Ohio, where he died in 1859.

The Work of Henry Barnard (1811-1900).—So much

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was accomplished by Horace Mann during the twelve years of his secretaryship of the Massachusetts State Board of Education that the public school revival has become inseparably associated with his name, and the student is likely to forget that he was only the most striking figure among a number of men to whom the success of the movement was due. The man who was the literary and philosophic exponent of the movement, and who had a greater influence than Horace Mann in the United States outside New England, was Henry Barnard. Barnard came of a cultured Connecticut family, was a brilliant student at Yale, and traveled widely in Europe and America, familiarizing himself with social and educational conditions wherever he went. The great work which Horace Mann accomplished for educational reform in Massachusetts, Barnard accomplished for Connecticut, as its first state superintendent of schools, and for Rhode Island, as its first commissioner of schools. Moreover, largely as the result of the agitation he carried on for many years for the establishment of a federal agency for the collection and publication of trustworthy information and statistics, the Bureau of Education at Washington was established in 1867 and Barnard was made its first commissioner. He organized the Bureau upon the lines along which it has ever since been administered, and tho compelled for political reasons to relinquish the position at the end of three years, he had already made searching investigations into almost every phase of school legislation, organization, instruction, and discipline.

Barnard's American Journal of Education.—But the splendid work of organization and administration accomplished by Barnard was not his chief contribution to the spread of the movement in favor of public sys-

tems and of reformed educational practices in the United States. Tho some reports of the great advances that had been made in Europe as the result of the work of Rousseau, Pestalozzi, Herbart, and Froebel had been published in the United States, they were desultory and fragmentary, and hence there was great need of a careful and systematic exposition of their principles and methods, if these were to influence the great mass of American teachers. Particularly was it necessary, now that Americans were becoming awakened to the need of a system of public schools supported and controlled by the state, that they be acquainted with the systems established in European countries, especially in Germany. This information was given in Barnard's *American Journal of Education*, "the most encyclopedic work on education in any tongue." To this monumental work Barnard devoted every spare hour of his time and his whole considerable fortune during an entire generation (1855-1881), and the thirty-one volumes of the *Journal* form a mine from which almost every American writer on education has since dug jewels. The *Journal* contains exhaustive discussions on almost every conceivable educational topic. The professional training of teachers, the education of delinquents and defectives, school architecture, the principles and practices of all the great educators from early times to contemporary times are but a few of the important subjects considered. The *Journal* stimulated the introduction of Pestalozzian methods, and gave the first adequate and influential description in America of the kindergarten (1856). In fact practically every reform introduced into American education down to 1880 owes much of its success to the support of Barnard's *Journal*, and as a source of information upon the development of ideals

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and systems in the various states of our country it is without a peer.

Influence of the Revival.—*In New England.*—As a result of the awakening in New England, the indifference that had been the popular attitude towards the common school rapidly disappeared, and in no part of the country did affection for it as the people's most cherished institution become so deeply imbedded. Horace Mann and Henry Barnard had worthy successors in the boards of education of Massachusetts, Connecticut, and Rhode Island, men who prosecuted their reforms with vigor and wisdom. The State boards were constantly given increased powers and used them to encourage action upon the part of the localities by means of inspection, supervision, and the distribution of state funds to improve buildings, equipment, and the status of teachers. By the close of this period (1876) the district system had been forced out of existence in a great many places, a very large number of the private academies had disappeared because of inability to compete with the public high school, and almost all of the large cities had provided for superintendents of schools. Maine, New Hampshire, and Vermont, because of sparseness of population and poverty of resources, introduced similar reforms more slowly, but all had adopted a centralized administration of their schools by the close of the period.

In the Middle States.—When Horace Mann began his great campaign in Massachusetts in 1837, New York was the most advanced state educationally in the country. As early as 1784 the state board of regents had been founded with the title "The University of the State of New York," to organize a system of public education above the elementary schools. And the Legislature

made frequent appropriations of money for distribution at first among those counties, and afterward among those townships which would contribute their share towards the support of elementary schools. In 1812 a state superintendent was appointed, the first in the United States; and tho in 1820 for political reasons the office was combined with that of secretary of state, from that time much was done to centralize control and build up a public school system thruout the state. Nevertheless opposition prevailed in many of the local areas against local taxation for the support of common schools. The private academies were given public moneys by the state for the training of teachers; and altho New York City founded a public school system in 1842, the public schools had to compete with those of the Public School Society until 1853, when the Society turned over its property to the city's board of education. That action is but one of several showing the influence of the revival in New York. In 1844 the first state normal school was opened at Albany; in 1854 the state superintendent was again given a separate existence, and finally in 1867 elementary education was made entirely free thruout the state by the abolition of tuition fees. What was accomplished in New York is typical of what was done in the other middle states, only progress was more slow. In 1849 the "permissive" provision of the Pennsylvania state law, whereby a district could decide whether it would levy a local tax for the support of common schools and thereby share in the state school fund, was abolished and the law was made compulsory. In 1857 the state superintendent of schools was given an existence separate from the secretaryship of state, and provision was made for the establishment of normal schools.) By the close of

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the period (1876) Pennsylvania had a complete system of state public schools. This was also true of New Jersey. Delaware did not organize a complete state system until after the Civil War and did not establish a state board with a state superintendent until 1875.

The Spread of Public School Systems in the West.—In Ohio, Indiana, and Illinois the history of the establishment of public school systems contains the same general features. In all three there was a struggle between the settlers in the southern portion of the states, who usually came from regions south of the Ohio, where free schools were considered to be only for paupers, and the settlers in the northern parts of the state, who came chiefly from New England and New York. In all three the campaign centered about the personality of some great enthusiast—Samuel Galloway in Ohio, Caleb Mills in Indiana, and Ninian W. Edwards in Illinois. In all three the plan was the same, viz., to arouse public sentiment in favor of common schools by holding common school conventions; to distribute pamphlets containing the facts concerning the illiteracy of the people and the wretched conditions of the schools; and to lobby at the state legislatures for good laws. In all three, despite the influence of local sectarian and vested interests, success was finally attained.) The strength of the forces opposed to the principle of public support of free schools is illustrated in the referendum vote taken in 1847 in Indiana, when 78,000 votes were cast in favor and 61,000 against. Even then the “permissive” provision of the law of 1849, passed to realize the principle, enabled one-third of the counties to neglect to organize schools; and private schools were enabled to share in the public funds at the discretion of the township trus-

tees. But by the beginning of the Civil War the subsidizing of private schools with public moneys and the "permissive" provision in the state school laws had disappeared, and a complete system of public schools in all three states had been established. In Michigan, which was settled chiefly by New Englanders, progress was continuous from the adoption of the first constitution in 1837, which provided for a permanent school fund and for a local tax in every district. The very first legislature established the University of Michigan, to which students were admitted in 1841. (In all these states the organization of centralized supervision, the establishment of state normal schools, and the development of state universities had rounded out a complete state system of public education before the close of this period.)

The Public School Movement in the South.—The interest in the establishment of common school systems that swept over the East and the West after 1840 was not without influence in the South. An increasing number of prominent men became interested in the movement and several conventions were held in different states to advance it. "Permissive laws" and "literary funds" resulted in considerable progress towards developing a belief in the wisdom of a state system of schools, tho only in North Carolina was one actually established before the war. Unfortunately after 1850 public opinion was more and more concentrated upon the slavery question. The destruction of life and property during the war was a tremendous setback, and until Reconstruction was complete the fear of "mixed" schools proved another great obstacle. Hence, tho the cause of education was much advanced in the South after the war by gifts from northern philanthropists and appropriations from Con-

gress, and tho a belief in the need of a state system of schools for social reconstruction became quite widespread, that desideratum was not generally realized until well into the next period.

IV. Period of Educational Expansion

After the Civil War, and particularly after Reconstruction, the extension of systems of free, public, state-supported, and state-controlled education was very rapid. In the newer western states sectarian jealousy and the conception of free public education as fit only for those who could not pay tuition fees never appeared, and the first constitution of each of those states provided for a complete system of free public education extending from the elementary school to and including the university. In the South by the close of the nineteenth century there existed in every commonwealth a state system of schools. And in the North and East the principles of unification and centralization had everywhere won out. The victory for centralized state control was due to a great many causes, but chief among them were the following: (1) the appropriation by the federal government of millions of acres of lands directly to the states for the support of elementary schools and of higher institutions for agricultural and technical education; (2) the distribution of state moneys by the state educational departments to the local geographical areas upon condition that the latter would meet requirements laid down by the former; (3) the unifying and standardizing influence of the state university, into whose hands the control of secondary education has in some states been placed; (4) the growing faith of the American people in public education as the agency for solving the political, social, and

economic problems which confront them; hence the necessity that it should be centralized in order to be efficient.

The evolution that has been traced in this chapter has resulted in an American system of education whose organization can be described with brevity. The federal constitution makes no mention of education, that being an activity which was left to the states in the partition of powers when the Constitution was adopted in 1788. The Federal Bureau of Education exists merely to collect and disseminate information upon education and it wields a very great influence in that way. Each state has an independent system of education, but in outline and characteristics they are all the same. In all of them there is a complete system of elementary schools, in which education is free, universal, and compulsory for seven or eight years. In most of them there is provision for free public secondary education, altho only in a few is the locality compelled to maintain high schools for all the children of proper age in the community. In all except some of the older commonwealths of the East there exists a state university wherein free higher education is offered to the young men and women of the state. America has not yet realized the ideal of equal opportunity for all in its economic, industrial, and social life. But it has applied it in education; for there exists an educational ladder from the kindergarten to the university. In some states a few rungs are still missing, but they are rapidly being supplied. In most the organization is complete; and attention is now given to other aspects of the educational problem, such as the better training of teachers, the improvement and enrichment of the curriculum, and the further extension of educational facilities.

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Germany, like the United States, is a national state made up of individual states, each of which is independent in the control of its internal affairs. There is no national system of education. The Prussian system differs in a number of respects from those of the other large states, yet it is sufficiently typical to enable the student by a study of it to acquire a good idea of German education.

Reforms of Frederick the Great.—Tho education in Prussia remained under ecclesiastical control during the greater part of the eighteenth century, it was there that the conception of education as the necessary basis for social well-being and political power first received acceptance. As early as 1717 Frederick William I issued a decree to the effect that, wherever schools did exist, children should be required to attend daily in winter, and when they could be spared from home in summer, which must be at least once a week. The king also contributed liberally from state funds towards the establishment of rural schools, and finding the chief difficulty to be a lack of intelligent teachers, established the first teachers' training school at Stettin. The significant thing about his activities is that he assumed it to be the business of the state to provide for elementary education, instead of leaving it to local and ecclesiastical authorities.

But it was Frederick William's son, Frederick the Great (r. 1740-1786), who laid the real foundation of the Prussian state system of elementary education. Frederick was the most tolerant, broad-minded, and humane of the enlightened despots who flourished in Europe during the second half of the eighteenth century.

He made many economic and social reforms looking towards the advancement of the welfare of the whole people, and showed an especial interest in educational reform. He centralized and improved secondary education, encouraged academic freedom, promoted research, and established an Academy of Sciences in Berlin. But his great contribution to the cause of public education was made in his General School Regulations of 1763. Among the most important provisions were the following: (1) all children were required to attend school from five to thirteen or fourteen; (2) if a child could, before thirteen, pass the state tests in the elementary branches imposed by the local school authority (the consistory), he might leave school—but only upon receiving a certificate of dismissal signed by the local teacher, preacher, and inspector; (3) no one was permitted to teach in a school unless examined and licensed by the local inspector and preacher; (4) a Sunday continuation school was to be maintained by the schoolmaster for unmarried young people beyond school age.

These regulations met with strenuous opposition. The peasants objected to the absence of their children from work. Many teachers were opposed because they could not meet the new eligibility requirements. The upper classes disliked them as likely to result in the spread of discontent among the peasantry. The clergy were not enthusiastic in enforcing a law which emphasized state control. Hence, tho Frederick strove vigorously to uphold the law, it could not be enforced everywhere. Nevertheless the General School Regulations of 1763 were the real foundation of the present Prussian system.

From Frederick the Great to Napoleon.—Frederick's code, however, left the administration of the schools in the hands of the clergy. His enthusiastic educational

adviser, Baron von Zedlitz, was able to take another step in advance the year after Frederick's death, 1787, viz., to secure the establishment of the *Oberschulkollegium*. This was a central board of school administration, to replace the local church consistories, and Zedlitz intended to have its membership composed of lay educational experts having a permanent tenure. But the new king, Frederick William II, was reactionary and appointed clergymen chiefly, and also refused to extend the jurisdiction of the body to higher schools. Nevertheless the establishment of the *Oberschulkollegium* represents the transition from church administration of schools under state direction to expert state administration by a central board.

A far more important step was made in 1794. Frederick the Great had appointed a number of eminent scholars and jurists to codify the Prussian law, and in 1794 the General Code was adopted. The twelfth chapter of the code was devoted to education, and in it the supremacy of the state was unequivocally asserted. It declared that "all schools and universities are state institutions, which may be founded only with the knowledge and consent of the state; they are under the supervision of the state and are at all times subject to its examination and inspection." Provision was made for compulsory school attendance and for state appointment of teachers. But the schools were secularized without eliminating religious instruction, for the code recognized the equal rights of the Lutheran and Catholic churches to give instruction in the schools to the children of their adherents.

The Reform Adopted after Jena, 1806.—The twenty years between the death of Frederick the Great and the battle of Jena, which destroyed the power of Prussia,

were years of decline in power and influence, due to the corruption of the government, the selfishness of the nobility, and the oppression of the common people. Prussia received a rude awakening at Jena, and her rulers determined to put their house in order. The army was reorganized, and the civil administration purged of corrupt favorites. But the great leaders who surrounded the king understood that their chief reliance must be upon a new education aiming to produce intelligent, patriotic Germans. The *Oberschulkollegium* was abolished, to get rid of clerical domination, and a "Bureau of Religion and Public Education" created as a section of the Department of the Interior. Wilhelm von Humboldt was placed in charge, and he and his immediate successor introduced far-reaching reforms, which made the state system a reality. These reforms, moreover, affected every branch of education, elementary, secondary, and higher. In 1809 the University of Berlin was founded, to which some of the most eminent scholars in Germany were invited as teachers, and they stamped it at once with the character which it has ever since maintained, as a great research institution. In 1812 all classical schools of whatever name were ordered henceforth to be called *Gymnasien*, provided they met the standard of attainment set by the government; and the "leaving examination," given by such schools in the presence of a state commissioner, was made the basis of determining admission to university work, and thus a preliminary step to many positions in the civil service. Moreover, a new course of study was adopted which pleased the adherents of the new humanism by emphasizing the importance of Greek, and the adherents of formal discipline by giving more time to mathematics. In order to secure competent teachers for the *Gym-*

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nasien, seminars were established in all the Prussian universities and searching examinations in scholarship introduced, which raised teaching in the secondary school to a profession. In elementary education great improvements were made in method, content, and spirit by the introduction of Pestalozzian teachers and the establishment of training schools for teachers. In 1817 the Bureau of Education was erected into an independent ministry; and in 1825 the organization of the state system of education was completed by the establishment of provincial school boards, responsible to the ministry of education, which were ultimately to displace the church consistories in control of local education. The schools were thereby finally separated from Church control and full state control was accomplished. However, many of the members of the school boards of the lower administrative areas into which the province is divided, viz., "governments" and "districts," are clergymen and they are the local inspectors of elementary schools. Many Prussian educators look forward to the elimination of these as the last necessary step in the complete removal of ecclesiastical influence from the schools.

The Period of Reaction, 1818-1872.—Every school regulation that has been made by the Prussian government since the establishment of the Ministry of Education in 1817 has been consistently in accord with state control of education. In almost every other respect, however, the period extending from that date to the Franco-Prussian War was one of reaction. Johannes Schulze, who was chairman of the government council for secondary education from 1818-1840, made the work and discipline of the Gymnasium very severe; he set the attainment of the best as the standard for all. The tendency—due to political motives—was to crush out

everything that pointed to freedom and individual initiative in education, such as would result from Pestalozzian idealism in elementary education; even the oversight of the actions and private reading of the pupils outside of school hours was very strict. The adherents of formal discipline were in control in the secondary schools; Latin was given additional time, and in the teaching of Latin form was emphasized rather than content. History, geography, and science were reduced a fifth in time. No attention was paid to the practical needs of the German people. The darkest period was after the Revolution of 1848, when kindergartens were prohibited as revolutionary institutions and liberal university professors subjected to a system of espionage.

The Period of Intense Nationalism (1872-).—Even during the preceding period the claims of the *Realschulen* for recognition as equal in standing to the *Gymnasien* and as better meeting the demands of modern life in Germany could not be set aside. In 1859 the *Realschulen* were divided into two classes; the one with a nine-year course, including Latin in the curriculum, was given full standing as a secondary school, and from 1870 its graduates were admitted to the universities to study science and modern subjects; the other, with a six-year course and optional Latin, admits only to the one-year “voluntary” military service (as a substitute for the obligatory two years required of those who attend only elementary schools). But after 1871 Germany became more and more industrialized and the need of scientific and technical education became more pronounced. Moreover, the intense spirit of nationalism aroused by the success of the War of 1870 made insistent demands for the emphasizing of German culture and the liberalizing of secondary education to meet the

needs of the new national life. At the celebrated Berlin School Conference of 1890, the present emperor stated the new view admirably. "First of all, a national basis is wanting in the *Gymnasien*. Their foundation must be German. It is our duty to educate men to become young Germans and not young Greeks and Romans. Hence we must make German the basis around which everything else revolves." In deference to the demands of the reformers, the first class of *Realschulen* described above were, in 1882, designated *Realgymnasien*, and some schools which had developed under the Department of Commerce as trade schools extended their work to nine years, were transferred to the Ministry of Education, and became known as *Oberrealschulen*. Since 1901 the graduates of all three secondary schools, *Gymnasium*, *Realgymnasium*, and *Oberrealschule*, are admitted on equal terms to university courses, except that students of divinity must have completed a *Gymnasium* course, in order to be acquainted with Greek, and students of medicine must have completed either a *Gymnasium* or *Realgymnasium* course, in order to be familiar with Latin.

As a result of this century of evolution there has developed in Prussia, and in other German states, a nationalized school system organized with a view to its being the principal support of the state. To uphold the government, to preserve the national culture, and to satisfy the needs of the new industrial life are the aims. Whatever a foreigner may think of the German system of education, it is the natural outgrowth of spiritual ideals and of the social changes that have taken place. The Germans firmly believe in it.

German Elementary Education.—There is no educational ladder in Germany such as exists in the United

States. Public elementary education, which is free, universal and compulsory, is given in the *Volkschulen* (people's schools). The course is eight years in length, ending at fourteen, and does not lead to any of the secondary schools. The students in a secondary school commence their course at nine years of age and continue for nine years. Upon entrance they begin to study a foreign language, Latin in the *Gymnasium* and *Realgymnasium*, French in the *Realschule*. Moreover, at fourteen, when a boy in the *Volkschule* has completed his course, the boy in the secondary school will have begun a second language and advanced to higher mathematics. As neither foreign languages nor mathematics beyond arithmetic are taught in the *Volkschulen*, it is impossible for a graduate of the latter school to fit into any secondary school even if he could afford to pay the necessary tuition fees. The preliminary instruction necessary for entrance to the secondary school ordinarily is obtained either from private tutors or in the *Vorschulen* (preparatory schools), tho a considerable number of pupils do go to the *Volkschule* for three years and then change over to a *Gymnasium* or a *Realschule*. The only thing for a graduate of a *Volkschule* to do is to go to work and attend the *Fortbildungsschulen* (continuation schools) and become skilled in the trade or vocation which he has entered. The *Volkschulen*, in other words, are intended for the children of the masses, who are destined for mechanical pursuits. The secondary schools are organized for the children of the wealthy classes, who look forward to the professions and higher civil service. It is in part, however, an aristocracy of brains, for the liberal remission of fees, and the special funds for the help of indigent pupils in some schools enable many boys who show noteworthy ability but

whose parents are poor to enjoy the full advantages of a secondary education on a par with the wealthy. For the middle classes who cannot afford to send their children thru a secondary school, but who for social reasons do not want them to go to a *Volkschule*, there have grown up *Mittelschulen* (middle schools), which charge a fee, have a course of nine or ten years, and teach a foreign language in the last three years. The great efficiency of the German *Volkschule* is due in part to the professionally trained teachers who are certificated by the state and hold permanent positions. But the splendid percentage of attendance at school and the length of the school year—which is seldom less than two hundred and thirty days—combine to give a situation very favorable for good work.

German Secondary Education.—A fair idea of German secondary education may be secured from the diagram on the following page. In all three institutions of secondary education the course of study covers nine years, and the graduates of each are admitted upon equal terms to university courses except that, as already mentioned, matriculants in theology must be graduates of the *Gymnasium*, and matriculants in medicine must be graduates either of the *Gymnasium* or *Realgymnasium*. In small cities and in rural districts, institutions are found which give but six of the nine years of the course. These are called *Progymnasien*, *Realprogymnasien*, and *Realschulen*; their existence is largely due to the requirement of at least six years' residence in a secondary school to be permitted one year's voluntary service in the army instead of two years' conscript service.

The difference between these three kinds of secondary schools is chiefly one of curriculum, for in organization, administration, discipline and methods of teaching they

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are alike. The *Gymnasium*, the classical school, has as its fundamental studies Latin and Greek and is the stronghold of the adherents of formal discipline. It is attended chiefly by the sons of the aristocracy and pro-

		Gymnasium	Real-gymnasium	Ober-realschule					
		Number of Week-hours in Nine Years							
NINE YEARS	Differentiated	German.....	26	28	34	SIX YEARS	Pro-gymnasium		
		Latin	68	49	..			Real-progymnasium	Real-schule
		Greek	36	..	..		
		French	20*	29	47				
		English.....	..	18	25				
		History.....	17	17	18				
		Geography...	9	11	14				
		Mathematics.	34	42	47				
		Science.....	18	29	36				
		Writing.....	4	4	6				
		Drawing.....	8	16	16				
	Same in all	Religion	19	19	19				
		Gymnastics ..	27	27	27				
		Singing	{ 4	4	4				
	Optional		{ 18	18	18				
		Drawing.....	8	..	..		
		Hebrew.....	6	..	..		
		English.....	6*	..	..		
		Geometrical drawing ...	..	10	10			

* Interchangeable.

In some schools one-half the Greek may be omitted and English, French, and mathematics taken in place.

Additional writing is required of those whose penmanship is deficient.

After the second year singing is required only of those who are gifted vocally.

professional classes, and graduation from it carries social prestige which is highly valued. The *Realgymnasium*, the Latin-scientific school, has Latin in every year, but no Greek, the place of the latter being taken by French and English, and more attention is given to science and

mathematics. The *Oberrealschule*, the scientific school, eliminates classics entirely, substituting French and English, and devotes much more time than either of the other two to mathematics and science. The social position of those who attend the *Realgymnasien* and *Oberrealschulen* is not considered so good as of those who attend the *Gymnasien*. They are usually the sons of the commercial and manufacturing classes.

It is evident that the difference in the curricula of these three institutions forces a German parent to choose the life work of his son at the early age of nine, usually before he has given any indication of his special aptitudes. A boy who once enters the *Realschule* cannot later transfer to the *Gymnasium*, because Latin begins in the first year of the *Gymnasium*. And he cannot transfer from the *Realgymnasium* to the *Gymnasium* after the third year because he will not have had Greek. To overcome this difficulty there was tried out, first at Altona in 1878 and after 1892 at Frankfort and elsewhere, the plan of grouping all three courses in one school and making the courses the same for the first three years. The plan was so successful that the *Reformschulen*, as these institutions are called, have been growing rapidly in numbers. Tho the curricula of all the *Reformschulen* are not identical, French instead of Latin is usually the only foreign language taught in the first three years. At the beginning of the fourth year the course divides, one section taking up Latin, the other English. At the end of another two years, the Latin section again divides into two, one taking up Greek, the other English. The aim is to arrive at results as good as those attained in the regular schools, and the adherents of the plan claim that the actual results show an education fully on a par with that of the

old-type institution, in Latin and Greek as well as in the other studies.

One other criticism of German secondary education, formerly directed against the attitude maintained towards the education of girls, no longer holds true. Co-education does not exist in Germany, except in the elementary school. Hence there were gradually established during the past four decades *Höhere Mädchenschulen* (higher girls' schools), to give higher education to girls. As a result of the reorganization of these schools which took place in 1908, a Prussian girl has now facilities for secondary education practically equal to those for boys. There are five types of secondary schools for girls. The *Gymnasien*, *Realgymnasien* and *Oberrealschulen* are similar to boys' schools of like name, but prepare for university entrance in ten years instead of nine. The *Frauenschulen*, from which a girl normally graduates at eighteen, prepare for domestic life and offer a wide range of courses in domestic arts, domestic science, and household economics, in addition to the substantial prescribed work in the ordinary secondary subjects. The *Seminär* (normal schools), from which a girl normally graduates at twenty, prepare teachers for the elementary schools and for the lower classes of the secondary schools. Not all the universities of Germany are open to women, and tho some universities have opened their doors to women for a long time they admitted them upon sufferance rather than as a right.

German Higher Education.—The German university is either a state institution or must receive the approval of the state for its establishment. Tho it charges fees, it is supported chiefly by the state and controlled largely by decrees of the minister of education. He also appoints the professors, usually, however, giving heed to

the recommendations of the faculty; and the professors are considered civil servants with certain definite privileges. The internal administration of the university is in the hands of the university senate, which is composed of representatives of the various faculties, and the rector, who is elected annually by the professors of full grade, with the approval of the minister of education. Tradition maintains the organization of the teaching staff into the four faculties of law, medicine, theology and philosophy, most of the new subjects in science, sociology, and literature being placed in the faculty of philosophy. *Lernfreiheit* (freedom of learning, i. e., of election) exists fully in the German university. *Lehrfreiheit* (freedom of teaching, i. e., academic freedom) has fairly well characterized it, except in the theological faculties. During the past generation there have grown up alongside the regular universities, institutions, which, tho called *Technische Hochschulen* (technical high schools), are really of university rank. They conduct the fine technical education in engineering, mining, commerce, agriculture, and forestry for which Germany is deservedly renowned.

FRANCE

The Early Nineteenth Century.—Despite the agitation of rationalists and naturalists in favor of secular and state-controlled education in the latter part of the eighteenth century, French education had a religious purpose and was administered by the clergy practically down to the eve of the Revolution of 1789. The National Convention between the years 1792 and 1795 secularized and confiscated the church schools, and gave attention to a great number of reports and bills looking to the estab-

lishment of a national and lay system of education. But that desideratum remained little more than a cherished hope, for with the exception of the establishment of the Normal School and the Polytechnic School at Paris in 1793, comparatively little was accomplished. Napoleon reorganized secondary and higher education, abolished the autonomy of the old universities, most of which had become moribund, and changed them, with the exception of Paris, to mere groups of faculties whose chief work was the granting of degrees. Then in 1806 he united all secondary and higher institutions into one corporate body controlled by the state and denominated "The University of France." For the better administration of the University, he divided the country into administrative "academies," each with a rector and an academic council, having supervision over the educational work of the "academy." This centralized system remained practically unchanged till 1875.

Guizot's Law, 1833.—Napoleon did nothing, however, to reorganize elementary education. The Church was permitted again to assume control of it and special favor was shown to the Christian Brothers, whose schools had been suppressed in 1792. This policy, moreover, was continued during the Restoration, and the revolution of 1830 found elementary education almost entirely under the control of the teaching congregations. The status of the lycées and communal colleges remained unchanged. Fortunately the first minister of public instruction under the July monarchy was M. Guizot, who rendered the cause of education a magnificent service. He immediately attempted to create a public opinion favorable to the establishment of a real system of popular education, and the Law of 1833, the passage of which he secured, is the foundation of the French na-

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tional system of education. This law established a system of elementary schools of two grades, primary and higher primary, the former to be established in every commune and the latter in large communes. Tho they were to be supported partly by fees, they were to receive grants from the communes and the state, and were to admit gratis the children of the poor. Moreover, the certification and appointment of teachers were reserved to the state, and provision was made for freedom in religious instruction. Under this law there was a remarkable increase in the number of primary schools, of pupils enrolled, and money expended for elementary education. Moreover, to secure the necessary supply of teachers, some thirty normal schools were established. Unfortunately the desire on the part of the Second Empire to secure the support of the Church resulted in an attitude unfriendly to the extension of state primary schools and favorable to the establishment of religious primary schools. Hence when the empire fell in 1870, tho considerable advance had been made in public elementary education, there had been a retrogression in the realization of the idea of a national system of education supported and controlled by the state.

The Third Republic (1871-).—The Republican leaders, led by Gambetta, determined to lay the foundations of the Republic upon a basis of universal education. In the decade 1871-1881 many millions of francs were spent in school buildings and equipment and in the establishment of manual and technical schools. In 1881, schools having been established in practically every commune, primary instruction was made free, and in 1882 compulsory, between the ages of six and thirteen. To provide the teachers necessary for this great increase in schools, every *département* (county) was required to

provide a normal school for teachers of each sex. To make the schools secular was a harder undertaking and became one of the burning questions in French politics during the next generation. In 1881 all teachers were required to hold a state certificate. In 1886 clergymen were forbidden employment as teachers in the public schools. Finally, by the laws of 1902 and 1904, all clerical schools were closed. The state, therefore, in France has almost a monopoly of elementary education. There are some free schools, i. e., non-state schools, but they must be taught by laymen. As a result of all the educational statutes passed since the beginning of the Third Republic, France has the most completely centralized system of state-controlled and state-supported schools in western Europe.

French Elementary Education.—The French child of three can enter an *école maternelle*, or mother's school, as the institution similar to the kindergarten is called, and remain there until he passes into the *école primaire* (primary school) at six. The primary school course is by law compulsory to thirteen, but the law is not faithfully observed and many children leave at twelve and some even at eleven. Above the primary school is the *école primaire supérieure* (higher primary school), the course in which is generally three years and devoted to more practical work, usually of a vocational nature. There are also continuation schools, supported by the various communes and subsidized by the state, for agricultural and industrial education. Most of the elementary schools are either boys' schools or girls' schools, co-education existing usually only where it cannot be avoided.

French Secondary Education.—Secondary education in France is given either in the *lycées*, which are national

schools supported partly by fees but chiefly by the state, or the *collèges communaux* (communal colleges), which are local schools maintained partly by fees but chiefly by the commune with some aid from the state. The communal colleges, tho providing similar courses, have not the same social standing as the *lycées* and their professors need not meet such high requirements for appointment. As in Prussia, neither of these institutions fits upon the primary schools, tho boys may transfer from the primary school at ten, when the course of the *lycée* and communal college usually begins. The following diagram will give some idea of the organization and curriculum of the French secondary school:

<i>Lycée</i> 7 years or Forms	First Cycle 10-14	{ Course A—Classical Course B—Scientific
	Second Cycle I. 14-16	{ Section A—Greco-Latin Section B—Latin-Modern Language Section C—Latin-Scientific Section D—Scientific-Modern Language
	II. 16-17	{ Mathematical—Emphasis upon Science Philosophical—Emphasis upon the literary and social humanities

The boy enters the *lycée* or the communal college usually at ten and elects at once whether he will spend the first “cycle” of four years pursuing classics or science. At fifteen he enters the second “cycle” and, no matter which course he pursued in the previous years, he may now elect any one of the four courses into which the second “cycle” is divided; if he changes from Greek to a modern language course, or vice versa, opportunity

is given him to make up the language in which he is deficient, without loss of time. The last year is spent in either the philosophical or the mathematical faculty, i. e., in specialization either in the humanities or in science. This choice also is unrestricted by the course pursued to that point. The completion is crowned by a difficult state examination and the baccalaureate degree, which is highly prized as it is necessary for entrance to the university or the professions.

Secondary education for girls hardly existed in France before 1880, when the law creating *lycées* and colleges for women was adopted. Up to that year girls received their education chiefly in convents and private schools, but since then there has been a steady increase in the number of public secondary schools for girls. The course in the girls' *lycée* is but five years in length, there being no classics in the curriculum and only elementary mathematics and science. The places of these subjects are partly taken by courses in hygiene, drawing, music, and domestic economy. The teachers are nearly all women. As in the case of boys, a special higher normal school has been established to prepare teachers for girls' *lycées*.

French Higher Education.—The old universities, which had come down from the Middle Ages, were in such a moribund state at the opening of the nineteenth century that Napoleon destroyed their autonomous existence when he created the University of France in 1806. The "academies" into which he divided the country were each to have university faculties of letters and science near or at the principal *lycées*, and their chief function was to examine for the higher licenses. The result of this action was to reduce French higher education to a low estate during the greater part of the nineteenth

century, for practically no change in the status of the faculties took place until 1885. Then a law was passed to permit them to organize a governing council, to co-ordinate the different courses, and to hold property as a corporation. It was not until 1896, however, that a complete reorganization of higher education took place. In that year the title of university was restored, and a university was established in each of the sixteen academies except one. As yet only eight of these are complete universities, that is, have all four faculties of law, medicine, science, and letters, tho all have the faculties of letters and science. The professors are appointed by the minister of public instruction upon nomination by the members of the faculty, and receive their salaries from the state. Each faculty has a dean, and the rector of the university forms, with the deans and other elected representatives of each faculty, the university council, which is the governing body. All universities are open equally to men and women, and admit foreign students. In addition to the universities, there are numerous technical and professional schools offering higher education.

As already stated, France has the most completely centralized system of education in western Europe. At the head of the entire system is the "minister of public instruction and fine arts." He is assisted by three directors, one each for superior, secondary, and primary education. At the head of each of the academies into which the country is divided, is a rector assisted by an "academic council"; he has authority over all three fields of education in the academy, except as to the appointment of teachers. This is done by the prefect of the *département*; and as he is a political appointee, this power has had the evil effect of bringing the schools

into politics. The efficiency of the entire system is made secure by the maintenance of a complete corps of state, academy, and district inspectors, assisted by local school committees. In no other country does the centralized administration of the state loom so large in education. It appoints the teachers, fixes the salaries, maintains the pension system, controls the curriculum and methods of teaching, and supervises private instruction.

ENGLAND

The Early Nineteenth Century.—We saw in Chapter XVI that England, more than any other great state of western Europe, delayed the organization of a public school system and relied upon philanthropy to do the work of the state in education. This was chiefly due to the belief that education was not a function of the state but should be supervised by the Church, and to the hesitancy of the governing classes in permitting the education of the masses. It required three decades of agitation on the part of a group of reformers before the government took the first step towards state support of elementary schools. That step was one of the fruits of the Reform Bill of 1832. In 1833 a parliamentary grant of £20,000 a year was made, to be distributed thru the two religious educational societies, the National Society and the British and Foreign Society, for the sole purpose of aiding in building schoolhouses for which subscriptions had already been collected. From that time until the Act of 1870, the two societies remained the media for the distribution of the state grants and thereby acquired a vested interest which greatly hampered the development of a state system, the National Society, representing the Established Church, being

particularly opposed to it. But the reformers maintained an incessant agitation, founding public school societies thruout the country, and compelling the government to take more and more decisive steps in the direction of a state system of schools. In 1839 the annual grant was increased to £30,000 and a special committee of the Privy Council on education established. This resulted in a step towards state control, for the new committee insisted that, in order to share in the funds, a school must be open to government inspection. During the next thirty years a number of parliamentary committees were appointed to investigate the condition of popular education, and in almost every case an investigation was followed by increased governmental interest and control. One action, adopted in 1861, and having the good intention of increasing the efficiency of the schools, introduced a principle that had unfortunate consequences, viz., "payment by results." According to this principle, the grant of state funds to a school depended upon the results shown by its pupils in the governmental examinations. This provision, which has only recently been abandoned, had the effect of formalizing instruction, as the schools naturally worked almost solely towards the examinations.

The Elementary Education Act of 1870.—Finally in 1870, largely as the result of the great extension of the franchise in 1868, Parliament passed a bill by means of which a system of elementary schools was established, to be organized, supported, and controlled by the state. The bill provided that, wherever there was a deficiency in school accommodations, the voters of the community might elect a school board to maintain an elementary school. These "board" schools were to be supported partly by local rates (taxes), which must equal the

government grant. The "voluntary" schools, i. e., the church schools, were to share in the government grant but not in the local rates; and the government grants to all schools were to depend upon the reports of the government inspectors. The board schools were permitted to give only undenominational religious instruction, and all schools were required to put religious instruction either at the beginning or the end of the school session in order that a pupil might take advantage of the "conscience clause" of the act, according to which any pupil might withdraw whose parents objected to the kind of religious instruction given. This splendid law, which finally gave England a real basis for a national system of education, had nevertheless an almost fatal defect, i. e., the compromise which permitted the sectarian voluntary schools to receive government aid. It was inevitable that the competition between the two kinds of schools would result in bitterness, a bitterness the intensity of which it is hard for Americans to understand. During the next generation both kinds of schools were greatly improved by various parliamentary acts, and elementary education was made wholly free, and compulsory up to thirteen. A great step in the direction of a real national system was taken in 1899, when a central board of education was established to take over the powers of all official bodies that had hitherto shared in the control of elementary education. The privilege of local rates which the board schools enjoyed enabled them to make phenomenal progress. By 1902 they had as many pupils as the voluntary schools, and more and better teachers, and were able to spend a greater amount of money per pupil. This progress was bitterly envied by the Established Church, and in return for its support in the parliamentary election of 1895 the Conserva-

tive party promised to provide better maintenance for the voluntary schools.

The Education Act of 1902.—In 1902 the Conservatives were able to push thru Parliament an act whereby the voluntary schools were permitted to share the local school rates with the board schools. All schools were made part of one comprehensive system, and the administration of all schools was centralized in the county councils for rural districts and in the municipal borough councils for cities. But the immediate supervision of the individual schools was placed in a local board of managers, which in the case of the voluntary schools was to consist of two members appointed by the council and four selected by the denomination. The new system thus favored the Established Church, but it had the good effect of placing all elementary schools under the administration of public officials, the councils, with the National Board of Education in general control. Another excellent provision was that which required the councils to support instruction in subjects beyond the elementary grade. This gave an impetus to the establishment of secondary schools under public control and support. Nevertheless, the Act of 1902 aroused intense resentment among the nonconformists, and it was one of the great issues in the political campaign of 1905. When the Liberals were returned to power, they at once passed thru the House of Commons a bill which would remedy the defect in the Act of 1902 by bringing all schools under the complete control of the public authorities. The bill, however, was rejected by the House of Lords and elementary education in England is today organized under the provisions of the Act of 1902. It is generally admitted, however, that the condition is an anomalous and temporary one

which will probably be remedied by legislation in the near future.

English Elementary Education.—The elementary education of an English child may begin at the age of five in the infant school. He may remain there until eight, engaged in activities similar to those of the kindergarten, and learning also the rudiments of reading, writing, and counting. Compulsory attendance is required everywhere in England under twelve, and local school boards are permitted to raise the age limit to fourteen. Unfortunately provision is made for partial exemption from school attendance after eleven for children engaged in agriculture and after twelve for children engaged in industry. There is a strong protest, however, against the existence of "half-timers," and it is hoped the practice will soon pass away. Before the Act of 1902 higher grade board schools were established in many of the larger cities, which competed with the endowed "public" and "grammar" schools and private schools in the field of secondary education. But in 1900 the Court of Appeals handed down the "Cockerton Judgment," forbidding the use of local rates for other instruction than elementary, and the Board of Education thereupon passed a regulation making fifteen the upper age limit for pupils in these higher elementary schools. These schools, therefore, continue to exist with a three-year curriculum, intended for children between twelve and fifteen, which emphasizes vocational education in addition to offering the general subjects. They have grown in numbers very slowly, having hardly two per cent of the children above twelve years in them. Large numbers of children who leave school at the close of the compulsory attendance age, enter the evening continuation schools; but these are insufficient in number. They

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form a link between the elementary schools and the specialized schools of science and art which are maintained by special grants of the national government.

English Secondary Education.—Until the commencement of the twentieth century practically no provision was made for secondary education for the children of the middle and laboring classes. Secondary education was in the control of the public schools, the grammar schools, and the “private adventure” schools. The English “public” schools are the seven endowed, aristocratic boarding schools, viz., Winchester, Eton, Shrewsbury, Westminster, Rugby, Harrow, and Charterhouse, and the two similar day schools, St. Paul’s and Merchant Taylors’, in London. They are all over three hundred years old, are attended by the social élite of England, and prepare directly for Oxford and Cambridge. The “grammar” schools are also endowed schools scattered thruout the country, many of as ancient lineage as the public schools and pursuing similar work. The “private adventure” schools sprang up in large numbers after the passage of the Reform Bill of 1832. They were usually founded by stock companies and were the first secondary schools to introduce a “modern side,” to compete with the “classical side.” They have done very fine work; they were practically the first institutions to provide secondary education for girls. These three kinds of schools are private, receive children at a comparatively early age, from seven to ten, and keep them until they are fourteen, sixteen, or, in the case of the public and some of the grammar schools, until they are eighteen years of age. The Act of 1902 provided for the establishment of public secondary schools by the local authorities, and the latter have undertaken the task with enthusiasm. In order to encourage secondary educa-

tion, the national grants are given to any schools, private or public, which meet the requirements of the Board of Education. This means that the curriculum, length of school term, and hours of attendance must meet with the approval of the Board, that no religious tests are demanded by the school, and that the school is open to the Board's inspection at any time. Moreover, twenty-five per cent of the annual admissions to any secondary school receiving governmental grants must be from public elementary schools. In 1910 there were altogether 1,037 secondary schools receiving government grants, of which 325 were public schools maintained by local authorities.

English Higher Education.—Until almost the close of the nineteenth century university instruction in England was given only in the ancient seats of learning, Oxford and Cambridge. These have been slowly modernized by the dropping of theological requirements for a degree, the introduction of laboratory courses in science, the establishment of colleges for women (who are admitted to the university courses tho not granted a degree), and by the general attempt to diffuse higher education thru university extension courses. Oxford and Cambridge still remain the strongholds of social and educational conservatism, however. During the past generation there have grown up municipal universities better adjusted to modern needs, progressive in spirit and purpose, granting degrees equally to men and women, and closely articulated with the municipal public schools. They have been established and are chiefly supported by the municipal governments of Birmingham, Manchester, Leeds, Liverpool, and Bristol; but they also receive parliamentary grants and gifts from private sources. The University of London, which was

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established in 1836 as an examining body only, became in 1901 a teaching institution; it consists of a federation of twenty-six colleges and schools, organized in eight faculties, and well articulated with the municipal schools. Altogether the progress made in England to provide for secondary and higher education in recent years is distinctly encouraging.

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PRONOUNCING GLOSSARY

An dro nī'cus	Guy enne' - (gē ěn)
An to nī'nus	Gym nă'si en - (hard g)
A quī'nas	Hi er o nym'ian
Ar chi mē'des - (k)	I sōc'ra tes
As'cham - (k)	lit te rā'tor
A ver'ro ēs	Lo yō'la
A vi cen'na - (s)	mai eu'tic (mi)
Ba'se dow - (do)	Mal pi'ghi - (hard g)
Bo ě'thi us	Me lanch'thon - (k)
Cæs a rē'a	mis'si do mi nī' ei
Cas si o dō'rus	Pa chō'mi us - (k)
cat e chēt'i cal - (k)	pa lēs'tra
cat e chū'men al - (k)	Pan tă'gru el
Chrys o lō'ras	ped a gō'gus
Cōl'et	Per'ga mum
Co per'ni cus	Pes ta lōz'zi - (lōt si)
Cor dē'ri us	Pē'trarch
di das ca le'um	Phil an thro pin'um
dī'o cese - (sis)	Pris'cian - (sh)
Do na'tus	Ra bā'nus
e phēb'os	Ră'be lais - (lay)
E phe sus	Reuch'lin - (oy)
E pi cū rē'an	rhē'tor
E pi cū'rus	Rit'ter a ka de'mi en
E ra tōs'the nes	tō'ga vi rī'lis
E rī'ge na - (j)	Tor ri cel'li - (ch)
Fé ne lon'	Ur'su line
Gal i lē'o	Y ver don'
Gar gan'tu a	

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